

Water Gremlin Company

Please find attached the comments of Water Gremlin Company on Draft Permit No. 12300341-101, along with Exhibits 1-4 to our comments.

MARK R. KASTER
Partner
(612) 340-7815
FAX (952) 516-5607
kaster.mark@dorsey.com

March 3, 2023

VIA ELECTRONIC FILING

Mr. Jacobe Timler, Permit Engineer
Minnesota Pollution Control Agency
Industrial Division
520 Lafayette Road North
Saint Paul, Minnesota 55155-4194
Jacobe.Timler@state.mn.us

**Re: Water Gremlin Comments on Preliminary Draft Air Emission Permit No.
12300341-101**

Dear Mr. Timler:

We write on behalf of our client Water Gremlin Company (“Water Gremlin” or the “Company”) to provide comments on the Preliminary Draft Air Emission Permit No. 12300341-101, re-noticed for public comment on February 1, 2023 (“Re-Noticed Draft Permit”). As you are aware, the Company provided detailed comments on the draft permit that was initially placed on public notice on July 20, 2022 (“Originally-Noticed Permit”). Water Gremlin stands by its comments on the Originally Noticed Permit and incorporates them in full herein as part of the record. The Company is duly concerned that while the MPCA tried to set forth additional justification to the Re-Noticed Draft Permit and supporting Technical Support Document (“TSD”) in an apparent effort to shore up its legal exposure, the Re-Noticed Draft Permit only further compounds the significant factual, scientific and legal issues that were present in the Originally-Noticed Permit. These additional, and in some case substituted, justifications only reinforce the fundamental incoherence of the proposed permit requirements, which regulate *trans*-1,2-Dichloroethylene (“TDCE”) emissions as if *daily* use is a critical variable, when the permit limits are premised on *average* exposure over at least an eight-year period. The fact that MPCA chose to re-notice the permit is evidence itself that the factual underpinnings of the permit are at issue. Rather than address Water Gremlin’s petition for a contested case hearing, the agency took no action on Water Gremlin’s petition and re-noticed the permit with new terms and conditions never disclosed, discussed or even reviewed with Water Gremlin. The agency’s approach has been a moving target from the inception of the over 4-year permit application process. In the words of the MPCA’s Commissioner’s office, their intention from the beginning has been to put in place the most restrictive permit possible.¹ This cram down approach is in direct contravention of Minnesota law. There is simply no scientific, factual or legal basis for the

¹ Comments of MPCA Assistant Commissioner Craig McDonnell at an MPCA public meeting regarding Water Gremlin, held on December 10, 2020.

March 3, 2023

Page 2

combination of monitoring and emissions limits and one-of-a-kind conditions in the Re-Noticed Draft Permit.²

The facility limit for solvent use proposed in the Re-Noticed Draft Permit continues to be based on an improperly derived and inappropriate health benchmark and a series of assumptions and compounding safety factors that are not based in fact, law, or promulgated rule and are not tied to any identified risks to the community surrounding the Water Gremlin facility.³ In addition, the Re-Noticed Draft Permit continues to contain ongoing monitoring requirements that are as costly as they are unnecessary, despite the MPCA's efforts to include additional or substitute justification for this monitoring in the Re-Noticed Draft Permit. As a result, the Re-Noticed Draft Permit will materially impact Water Gremlin's ability to meet demand for its essential products, which are critical for automotive, telecommunications, aviation, and military applications.⁴ Consequently, as we did in our prior submission, in addition to these comments, the Company is submitting today a Petition for a Contested Case Hearing ("Petition") regarding certain factual bases for the Re-Noticed Draft Permit. Water Gremlin's Petition is attached as **Exhibit 1**.

In discussions with the MPCA prior to the Originally-Noticed Permit being placed on public notice in 2022, Water Gremlin proposed to invest over \$3 million in UV-based coating machines that would significantly reduce the use of solvents in its operations over the course of the five-year permit term. This transition would require a slightly higher allowance of emissions in the initial two years (during construction of the UV coaters) than what was proposed in the draft permit (but still below the Minnesota Department of Health's health benchmark), followed by a steep drop-off of solvent use, such that the overall emissions over the five-year permit term would be ***much lower*** than what is proposed to be allowed under the Re-Noticed Draft Permit. Unfortunately, as detailed below, the MPCA rejected this proposal, on the grounds that the

² With the terms of the Re-Noticed Draft permit, the MPCA is subjecting Water Gremlin to costs and requirements that are not required by law, are not commensurate with the risks, and have no precedent in the state. If these permit terms were applied to the hundreds of other air permits issued by the agency, Minnesota would simply not have any meaningful manufacturing operations in the state. For example, the Re-Noticed Draft Permit is far more onerous than a USEPA Title V operating permit, which addresses emissions from major facilities under the Clean Air Act. Water Gremlin has calculated its environmental costs since 2019 at over \$25 million, and the projected costs for compliance with the MPCA's Re-Noticed Draft Permit (5 years) is another \$13 million. These extraordinary costs are not normal, imperative or consistent at any level with other permitted facilities in Minnesota. If these extreme conditions are not viewed as arbitrary, capricious and an abuse of agency discretion, then all permittees in Minnesota must be on notice of the unbounded permitting risks to existing, modified and new operations in the state.

³ See, e.g., the recent Minnesota Court of Appeals decision, *In re Shakopee Mdewakanton Sioux Cmty.*, 2023 Minn. App. LEXIS 34 (February 27, 2023).

⁴ The Company supplies products for consumers, commercial and industrial applications, government operations and military uses. The arbitrary limitations placed on the Company's operations via a permit premised on unfounded factual assumptions and unpromulgated rules and standards will significantly constrain production and could result in disruptions to critical supplies.

March 3, 2023

Page 3

proposal was not included in the Company's formal permit application and the MPCA needed to "move forward with the permit issuance process."⁵ Astonishingly, the MPCA thus rejects a more protective permit on the grounds that it must immediately issue a less protective permit. This is particularly ironic given the numerous permit standards and requirements the MPCA itself has unilaterally imposed since submission of the original permit application. Moreover, while the MPCA refused to substantively engage with Water Gremlin's proposal in the name of moving forward with the permit quickly, the MPCA, unilaterally and without any advance communication to Water Gremlin, has taken the step of re-noticing (and thereby delaying) the draft permit in order to shore up its own legal exposure.

It is disheartening that in its desire to constrict Water Gremlin's operations to the maximum extent, the MPCA rejected Water Gremlin's sensible alternative requirements proposal. The Re-Noticed Draft Permit retains many of the same factual, legal, and technical failings of the originally-noticed permit.

The remainder of this letter and the attached exhibits provide a more detailed discussion of Water Gremlin's comments on the Re-Noticed Draft Permit. Many of these issues were raised by the Company in our prior comments, but as we point out, for the most part the MPCA did not accept our comments or resolve the issues we raised.

I. Comments on the Re-Noticed Draft Permit

A. Effect on Existing Obligations

The Company reiterates its prior comment that the March 1, 2019 Stipulation Agreement signed by Water Gremlin and the MPCA ("Stipulation Agreement") and the unilateral January 17, 2020 Administrative Order issued by the MPCA ("Administrative Order") should be expressly terminated upon final issuance of the Re-Noticed Draft Permit. As the Company pointed out in our initial comments, the Stipulation Agreement and Administrative Order were intended to apply *interim* regulatory requirements to the Company while its application for a new facility air permit was pending. Keeping them in place will impose duplicative and often conflicting requirements on the Company, as discussed further below. The MPCA acknowledges in the TSD that all actions required by the Administrative Order to resume coating operations have been completed by the Company, and that all requirements of the Stipulation Agreement must be completed prior to issuance of the Re-Noticed Draft Permit.⁶ Therefore, the Stipulation Agreement and Administrative Order must terminate upon issuance of the final permit.⁷

⁵ TSD, Attachment 11 at Sec. III.A.

⁶ TSD at p. 8.

⁷ We note that the Stipulation Agreement and Administrative Order impermissibly failed to include any termination provisions, and since Water Gremlin has complied with and completed all of the required response actions, Water Gremlin in its prior submission and again in this submission is requesting

March 3, 2023

Page 4

In response to the Company's initial comments pointing out that the Stipulation Agreement and Administrative Order should be terminated upon permit issuance, the MPCA notes that the Stipulation Agreement will be terminated "when the Regulated Party receives written notice from the MPCA that the Regulated Party has demonstrated to the satisfaction of the MPCA, that all terms of the Agreement have been completed."⁸ The MPCA has never given Water Gremlin any indication as to what entails "completion" of the Stipulation Agreement requirements such that it could be terminated, and provides no details in the TSD or otherwise as to the terms under which the Administrative Order could be terminated. Rather, the MPCA continues to hold Water Gremlin hostage with outdated and burdensome requirements, despite Water Gremlin providing nearly 4 years of monitoring and recordkeeping data demonstrating its compliance with the Stipulation Agreement and Administrative Order. The facility changes required by these agreements have been completed, and the sampling requirements from the Administrative Order in particular have outlasted their usefulness. For example, the Re-Noticed Draft Permit does not include further indoor air or paired sub-slab testing, yet Water Gremlin must continue to perform this expensive and intensive sampling regimen until the Administrative Order is terminated.

In response to the Company's comments on the Originally-Noticed Permit, the MPCA blithely notes that "there are not conflicts" between the requirements of the Draft Permit and those of the Stipulation Agreement and Administrative Order.⁹ This is factually incorrect. For example, the methods for calculating daily volatile organic compound ("VOC") emissions differ between the Re-Noticed Draft Permit and the Administrative Order. Specifically, Re-Noticed Draft Permit requirement 5.2.9 requires the Company to include emissions from COMG1 (i.e., all the coaters and the distiller) in the calculation, while Administrative Order requirement 55tt requires Water Gremlin to include VOC emissions from the coating operations, mitigation system, and "any other source at its Facility." Should Water Gremlin comply with the more recent requirement or the seemingly more strict requirement from the Administrative Order? Additionally, the Stipulation Agreement contains obviously outdated requirements that directly conflict with the Re-Noticed Draft Permit such as Requirement oo, which limits solvent usage to 0.90 tons per calendar day, and Requirement tt, which provides for a reduction in Water Gremlin's daily solvent usage rate if a monitoring result exceeds 70 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

The MPCA's unilateral Re-Noticed Draft Permit is touted by the agency as a comprehensive document, totaling over 600 pages and accompanied by a repetitive 1,400 page Technical Support Document. In all of that excess, the MPCA is unable to identify *any* public

termination of these documents. To put the agency delay in perspective, Water Gremlin has had to expend over \$100,000 per month on cumulative testing that the MPCA demanded was necessary to support permit terms, and now seeks to not only continue that obligation, but seeks another 2 years of such testing. All of Water Gremlin's testing has and continues to be submitted directly to the MPCA.

⁸ TSD Attachment 12, response to Water Gremlin comment A1.

⁹ *Id.*

March 3, 2023

Page 5

health or policy basis to continue either the Stipulation Agreement or Administrative Order that is not already addressed in the Re-Noticed Draft Permit. Continuation of these Orders following issuance of the Re-Noticed Draft Permit is purely punitive and is an ongoing economic waste.¹⁰

For the reasons stated above and in the Company's prior comments dated August 19, 2022, the Re-Noticed Draft Permit should expressly terminate the Stipulation Agreement and Administrative Order upon issuance of the final permit.

B. Proposed Facility TDCE Limit

1. Background of the Transition from TCE to TDCE

The Company voluntarily phased out the use of trichloroethylene ("TCE") in January 2019, *before* there was any legal requirement to do so. In considering the transition, the Company conducted a detailed environmental audit, including discussions with the MPCA. The MPCA recommended that the Company consult with the Minnesota Technical Assistance Program at the University of Minnesota ("MNTAP") regarding potential replacement solvents, and MNTAP in turn helped identify TDCE as a safe and effective alternative. In its updated TSD, the MPCA contests the Company's suggestion that TDCE was "recommended" by MPCA and MNTAP as a safe and effective replacement for TCE.¹¹ As discussed further below, when the Minnesota legislature decided to ban the use of TCE in the state, it directed the agency to consider less toxic alternatives. In fact, TDCE meets the criteria set forth by MPCA for a TCE substitute, and Water Gremlin worked with the state's MNTAP, as recommended by the MPCA. So regardless of whether MPCA directly "recommended" the transition to TDCE, the MPCA put forth the requirements and signed off on the transition in the Stipulation Agreement. Pursuant to the Stipulation Agreement, Water Gremlin transitioned from using TCE to using the FluoSolv WS solvent, which uses TDCE as its main ingredient. TDCE is not classified as a hazardous air pollutant ("HAP") under the Clean Air Act and to the Company's knowledge, neither MPCA nor the Minnesota Department of Health ("MDH") disputes the fact that TDCE is a less toxic alternative to TCE as required under Minnesota law.¹²

It also is important to highlight the "moving target" nature of the Company's facility-wide TDCE limit from the time of the Stipulation Agreement in March 2019 to today. At the time of the Stipulation Agreement, the MPCA imposed a facility-wide limit on the use of FluoSolv of 0.90 tons per calendar day, calculated as a 24-hour sum, with a 90 ton per year ("tpy") annual limit.

¹⁰ Water Gremlin estimates the cost of compliance with the MPCA requirements is over \$13 million for the 5-year permit.

¹¹ See TSD at § 3.6.

¹² See, e.g., TDCE safety profile information such as that from 3M. 3M, "t-DCE: A safe, sustainable component in 3M Novec cleaning solutions," (June 2021), <https://multimedia.3m.com/mws/media/8115210/trans-dce-trans-dichloroethylene.pdf>. According to 3M, the safety profile of TDCE has been well characterized over the past 25 years.

March 3, 2023

Page 6

Water Gremlin has fully complied with this requirement. The 0.90 tons per day limit was calculated by the MPCA based on MDH Risk Assessment Advice (“RAA”), in which MDH determined a chronic RAA value for TDCE of 70 µg/m³. This value was based on an ingestion-to-inhalation (“route to route” or “RTR”) extrapolation from the United States Environmental Protection Agency’s (“USEPA”) chronic oral reference dose for TDCE of 0.02 mg/kg-day, which was published on the USEPA’s Integrated Risk Information System (“IRIS”) webpage. Since that time, there have been no new animal or human studies on the effects of TDCE exposure. Nevertheless, the MPCA and MDH have further tightened the facility TDCE limit by a factor of nearly 3.

In May 2020, MDH published an updated RAA for TDCE, with a sub-chronic inhalation health benchmark of 200 µg/m³ and a chronic inhalation benchmark of 20 µg/m³. The updated RAA was again based on route-to-route extrapolation using a chronic oral (not inhalation) reference dose of 0.005 mg/kg-day, taken from a 2018 assessment of oral toxicity by the California Environmental Protection Agency’s Office of Environmental Health Hazard Assessment (“CalEPA”), incorrectly and improperly incorporated into the RAA as discussed further below.

Based on this updated MDH RAA, the first draft permit shared by MPCA with Water Gremlin, dated June 7, 2021, included a limitation on TDCE emissions of 35 tpy, using a 365-day rolling sum, to be calculated each operating day for the prior 365-day period. Subsequently, an updated draft permit provided by MPCA, dated July 29, 2021, included a limit on TDCE emissions of 40 tpy, calculated on the same rolling 365-day basis. The next two permit drafts reverted back to the 35 tpy level from the original June 7 draft. As discussed below, the Originally-Noticed Permit and the Re-Noticed Draft Permit include the same limit on TDCE emissions of 32.6 tpy.

Water Gremlin submitted a Technical Memorandum commenting on the MDH and MPCA risk assessment methodologies to the MPCA on April 22, 2022, as well as a more detailed follow up Technical White Paper on August 19, 2022. The Technical Memorandum and Technical White Paper are attached herein as **Exhibit 4**. For the reasons set forth in these documents, Water Gremlin objects to the application of a 32.6 tpy limit in the Re-Noticed Draft Permit, as well as the analysis regarding the risk assessment, risk factors, and safety margins used to derive the limit. MPCA notes in the revised TSD that the MDH reviewed Water Gremlin’s supplemental Technical White Paper but that it did not change its conclusion with respect to the RAA. As discussed below, the MDH’s position with respect to the RAA and the MPCA’s reliance on it are untenable and unsupported by substantial evidence. For this reason, there is no basis in fact, science or the law for the TDCE limit being imposed by the MPCA. It is not based on any promulgated rule or standard, it is unsupported by substantial evidence, it is foundationally inaccurate (based on extrapolation of oral data), it is inaccurate in application (chronic vs sub-chronic limit) and is inconsistent with the agency’s own risk assessment guidance. The additional justification provided by the MPCA in the re-noticed TSD does not change these facts.

March 3, 2023
Page 7

2. Legal Authority

The MPCA relies heavily on the Minnesota TCE ban legislation to justify what it appears to argue is its unbounded authority to determine the TDCE limit for Water Gremlin's facility. The relevant portion of the statute reads as follows:

An owner or operator that must comply with this section and elects to replace trichloroethylene with another chemical must replace trichloroethylene with a chemical demonstrated to be less toxic to human health and reviewed in a form determined and approved by the commissioner of the Pollution Control Agency.¹³

MPCA argues in the TSD that this statute “provides MPCA additional authority and discretion to ensure that facilities replacing TCE with other chemicals demonstrate that the new chemical is less toxic to human health,” and that “MPCA has discretion in determining how to evaluate substitute chemicals and must approve any substitution.”¹⁴ This characterization egregiously overstates the authority granted by the Legislature. Additionally, the MPCA's reliance on this statute ignores the fact that Water Gremlin *voluntarily* eliminated the use of TCE at its facility in January 2019, more than a year before this statute was enacted and three and half years before this ban took effect in June 2022. Therefore, Minn. Stat. § 116.385 does not apply to Water Gremlin *at all*. Water Gremlin is not an “owner or operator that must comply with this section” because it had already phased out TCE by the time the statute was enacted and took effect. Thus, any reliance on the TCE ban statute to justify the MPCA's arbitrary TDCE limit for Water Gremlin's facility is invalid.

Additionally, all of the various iterations of the “moving target” MDH RAA discussed above were developed prior to this legislation taking effect. As the MPCA notes in the TSD, until Water Gremlin raised questions regarding the reliability of the MDH RAA, the MPCA was prepared to publish a draft permit with the 32.6 tpy limitation in April or May 2022, *before* the TCE ban took effect. Thus, the agency's argument that this statute retroactively gives it authority to rely on the MDH RAA in order to determine the TDCE limit is also inapposite.

Even if the statute did apply to Water Gremlin, which it does not, the statute does not grant MPCA authority to take the unbridled actions it did in determining the TDCE limit in the Re-Noticed Draft Permit. Once the alternative chemical (TDCE) is determined to be less toxic to human health, the agency's authority under the statute ends. The MPCA squarely acknowledges this in Section 3.6.2 of the TSD, when it writes:

Simply comparing the potency of the TCE replacement chemical to that of TCE or identifying whether the TCE replacement is a demonstrated carcinogen ***is an adequate***

¹³ Minn. Stat. § 116.385 subd. 3.

¹⁴ TSD Attachment 11 at § I.

March 3, 2023

Page 8

evaluation of impacts to human health from exposure to TCE replacement emissions from permitted facilities.¹⁵

Most fundamentally, neither MPCA nor MDH has ever disputed that TDCE is less toxic than TCE, even at the 70 µg/m³ limit incorporated in the Stipulation Agreement. Consequently, any special legislative authority granted to the MPCA by Minn. Stat. § 116.385 was both satisfied and exhausted by the 70 µg/m³ limit (and likely at higher levels). If the replacement chemical is less toxic than TCE at any specific exposure level, which all parties here agree TDCE is at 70 µg/m³, the reach of the statute ends and the MPCA cannot claim authority to impose additional limits on the replacement chemical under the statute. Any further restrictions must have a sound basis in law and science, independently of Minn. Stat. § 116.385. The next section demonstrates that the TDCE limit included in the Re-Noticed Draft Permit lacks such a basis.

3. TDCE Limit in the Re-Noticed Draft Permit

As discussed in the Company's prior comments, the proposed facility TDCE usage limit of 32.6 tpy in the Originally-Noticed Permit was determined by first applying the MDH's RAA chronic health benchmark for TDCE of 20 µg/m³, with additional adjustments downward (1) in Water Gremlin's Screening Risk Assessment Spreadsheet ("RASS") so that the final endpoint-refined hazard index for TDCE calculates specifically to 1.0 (one significant digit), rather than rounding index readings between 1.49 and 1.00 to 1 as provided by prior MPCA practice, and (2) in applying an additional 16 percent safety factor based on the current usage of TDCE at the facility, on the rationale that ambient air monitoring on site indicated that air dispersion modeling was allegedly under-predicting actual ambient air concentrations. As the Company pointed out in our prior comments, this approach was unsupported by science, facts on the ground, or prior agency practice

In the Re-Noticed Draft Permit, the MPCA again applies the flawed MDH RAA but abandons the RASS protocol altogether in arriving at a facility TDCE limit. Instead, the MPCA argues that because the RASS results do not match ambient monitoring results, it is no longer relying on the RASS at all. As discussed below, this is an even greater departure from agency practice than in the Originally-Noticed Permit, and is scientifically invalid for a number of reasons. Ultimately, the MPCA proposes the same 32.6 tpy facility limit on TDCE emissions. Indeed, other than the addition of a new post-hoc justification for it, the only material change to the facility TDCE limit is the addition of a more restrictive daily emission limit of .1600 tons per day for the first 365 days of the permit, which is unnecessary and unsupported.¹⁶ Because the

¹⁵ TSD at § 3.6.2 (emphasis added).

¹⁶ Water Gremlin objects to the .1600 tons per day limit to the extent it is based on the flawed 32.6 tpy TDCE limit. Additionally, as discussed further in Section I.C.3 of this Letter in the context of daily monitoring requirements, given that the facility TDCE limit is based on a chronic health benchmark rather than a sub-chronic or acute benchmark, there is no basis for the MPCA to mandate a *daily* emission limit of TDCE. As long as emissions do not cause ambient concentrations to approach the sub-chronic or

March 3, 2023

Page 9

MPCA's proposed facility-wide TDCE limit is now even more unsupportable than in the Originally-Noticed Permit, the Company reiterates its objection to the 32.6 tpy TDCE limit. There is simply no basis in fact, science or the law for the proposed facility TDCE limit of 32.6 tpy or the MDH RAA that MPCA erroneously reaffirmed its reliance upon.

Even though the RAA was reportedly developed to be a standard of general application, the RAA has not been proposed to be promulgated into state rule. As described in the Company's initial comments and below, the RAA is unsupported by any substantial evidence, it is foundationally inaccurate due to being based on MDH's improper extrapolation of oral exposure data, it is inaccurate in application of a chronic health benchmark rather than a sub-chronic, it is inconsistent with the agency's own risk assessment guidance and it has not been promulgated in any manner reflective of Minnesota's rulemaking process or from the abuses of agency discretion seen here.

(a) MDH RAA Health Benchmark

As noted above, the MDH RAA for Water Gremlin, which resulted in a sub-chronic inhalation health benchmark of 200 µg/m³ and a chronic inhalation benchmark of 20 µg/m³, was based on a RTR extrapolation of an oral reference dose to an air concentration. Attached to this letter as **Exhibit 4** are a Technical Memorandum and supplemental Technical Whitepaper from Dr. Deborah Gray, an independent toxicologist at Stantec, who has significant experience in toxicology, risk assessments, and in particular TDCE. Dr. Gray describes the many reasons why the MDH RAA does not provide a reliable basis on which to derive a permit limit for TDCE, including the inherent unreliability of RTR extrapolation, the lack of transparency, and the lack of peer review of the MDH's in-house route-to-route extrapolation.

In a memorandum provided as an attachment to the TSD, which was not revised or updated since the permit was initially noticed in July 2022, MDH "acknowledges the limitations associated with RTR extrapolation."¹⁷ MDH guidance further recognizes that sufficient toxicokinetic information must be available to support any attempted RTR extrapolation,¹⁸ but did not provide or cite to any of the necessary documents or other resources regarding the protocols for performing RTR extrapolation. Significantly, because it is extremely difficult to perform it reliably, USEPA very seldom engages in RTR extrapolation. The uncertainties associated with RTR extrapolation are often at least as great as the uncertainties, and magnify any limitations associated with, the underlying study on which the extrapolation is based.

acute benchmarks for TDCE, which is simply not plausible at Water Gremlin's facility, daily emissions are irrelevant.

¹⁷ See TSD Attachment 9, Minnesota Department of Health Memo from James Kelly to Kari Palmer dated July 13, 2022, at 5.

¹⁸ Minnesota Department of Health, "Statement of Need and Reasonableness, proposed Permanent Rules Relating to Health Risk Values," at 10-11 (August 2001).

March 3, 2023

Page 10

Furthermore and importantly, there was no reason for MDH and MPCA to rely on an oral-to-inhalation RTR extrapolation because in September 2020, USEPA established Provisional Peer-Reviewed Toxicity Values (“PPRTV”) for TDCE through the inhalation route of exposure, based on inhalation studies of TDCE exposure. As Dr. Gray notes, **“it is always more technically defensible to evaluate inhalation exposure to chemicals in the air using toxicity values derived from inhalation studies, and ingestion exposures using toxicity values derived from oral dosing studies.”**¹⁹ USEPA derived provisional chronic and sub-chronic inhalation reference concentrations for TDCE of 40 and 400 $\mu\text{g}/\text{m}^3$, respectively, based on review of inhalation toxicity studies consistent with the agency’s risk evaluation protocols. The current USEPA Regional Screening Level (“RSL”) concentration for residential air of 42 $\mu\text{g}/\text{m}^3$ for TDCE was calculated using the chronic provisional reference concentration. The method used by USEPA to derive both the sub-chronic and chronic provisional reference concentrations includes uncertainty factors to protect sensitive members of the population such as young children. Water Gremlin’s operations under the existing AO and Stipulation Agreements are well below the USEPA PPRTV reference concentration.

In the revised TSD, the MPCA notes that the Company initially pointed out the flaws with the MDH RAA and RTR extrapolation in April 2022, in response to a pre-publication version of the permit. Water Gremlin then met with the MPCA and MDH in June and submitted the two technical memoranda from Dr. Gray along with associated comments in response to the July 2022 initially-noticed permit. In the revised TSD the MPCA briefly notes that the basis for Water Gremlin’s proposed RAA “had significant limitations” and that the MPCA “determined this information did not change its conclusion” with respect to applying the MDH’s chronic RAA of 20 $\mu\text{g}/\text{m}^3$ to establish the facility-wide TDCE limit.²⁰ This is, simply put, non-responsive. The MPCA and MDH did not respond to the many issues of fact raised in Dr. Gray’s August 19, 2022 Technical Whitepaper. With respect to the alleged “limitations” of Water Gremlin’s approach, all studies of TDCE, like studies of most chemicals, have limitations. These limitations are the reason why USEPA employs well-established safety factors and conducts peer review in establishing PPRTVs. Any “limitations” of the PPRTV, however, are far outweighed by the limitations of relying on ingestion studies and RTR extrapolation.

In addition to being a colossal act of buck-passing by the agency, the MPCA’s decision to stand by the clearly flawed MDH RAA is not supported by substantial evidence and is contrary to law. As described further by Dr. Gray in **Exhibit 4**, the MDH’s stated rationales for rejecting the PPRTV in favor of a site-specific RAA derived through RTR extrapolation are unfounded. The MPCA did not adequately respond to Dr. Gray’s Technical Whitepaper, but notes in the TSD that it adopted the MDH RAA because such values rank higher than PPRTVs on the agencies’ hierarchy of toxicity value information sources. This may be the case, but the MPCA cannot hide behind its regular hierarchy when the Company has carefully and clearly

¹⁹ Exhibit 4, Dr. Deborah Gray Technical Whitepaper at p. 4.

²⁰ TSD at § 3.6 and Attachment 11 § I.A.

March 3, 2023

Page 11

pointed out the significant scientific and technical flaws in the MDH RAA. The PPRTV, by contrast, was developed through a well-documented peer-reviewed process.

In publishing the PPRTV, the USEPA concluded that the key inhalation study on which it was based was reliable. In any case, the USEPA's value is far more reliable than the MDH's RAA value derived in a closed-door RTR extrapolation, which, in addition to being inherently unreliable, was not peer-reviewed and does not appear to have followed established protocols. Instead, it appears to be a classic case of the MPCA and MDH cherry-picking data in order to develop a more stringent limit on Water Gremlin's operations.²¹ RTR extrapolation of an inhalation benchmark is inappropriate both on its own terms and especially given the existence of the USEPA's published PPRTV, which is peer-reviewed. The PPRTV sub-chronic and chronic reference concentrations for inhalation of TDCE in air were derived through a well-documented review of the best available inhalation studies of TDCE exposure at the time the PPRTV was published. As a result, the USEPA PPRTV reference concentrations are more transparent and supportable measures of inhalation risk than the MDH's RAA and iares the only proper scientific and factual basis on which to set the TDCE limit in the Re-Noticed Draft Permit.

(b) Chronic vs. Sub-Chronic Benchmark

Separately from the oral versus inhalation issue, the 20 µg/m³ RAA value used to form the basis of the TDCE limit in the Re-Noticed Draft Permit is the MDH's *chronic* health benchmark for TDCE. As noted in the TSD and MDH guidance, the MDH defines chronic (long term) exposure as over a period of 10 percent of a lifespan, or approximately 8 years, while a sub-chronic exposure is anywhere from 30 days up to approximately 8 years.²² In the originally-published TSD, the MPCA's rationale for utilizing the chronic exposure benchmark in the RASS was that the chronic RAA "matches planned facility operation" because "the permit will be issued for Water Gremlin to operate into the future." Additionally, the MPCA noted that the stricter standard was being used due in part to "prior unpermitted exposures" of the community. As Water Gremlin noted in comments on the Originally-Noticed Permit, the term of the proposed permit is only 5 years and per its own terms, is subject to re-review, revised modeling and assessment upon renewal. Therefore, it is not possible for any individual to have a "chronic" (i.e., more than 8 years) exposure to TDCE during the term of the permit. Additionally, with respect to "prior unpermitted exposures" the MPCA did not allege (1) any prior unpermitted emissions of TDCE, or (2) any connection between historic TCE emissions and future TDCE emissions. In fact, the MDH admitted that there is no known cumulative interaction between TDCE and prior TCE exposure. Furthermore, there is no reason to believe that any effects of

²¹ Water Gremlin notes that the MDH memorandum attached to the TSD notes that the MDH RAA is "two-fold lower" than the USEPA PPRTV, suggesting that one reason the MDH retained its 20 µg/m³ RAA is that it is a more stringent standard, regardless of its dubious scientific basis.

²² Minnesota Department of Health, "Air Exposure Durations," (April 2020), <https://www.health.state.mn.us/communities/environment/risk/docs/guidance/air/airdurations.pdf>.

March 3, 2023
Page 12

TDCE are cumulative of those with prior TCE exposure, because both TCE and TDCE are quickly eliminated from the body and do not bioaccumulate.

Seemingly recognizing the weakness of its position, in the revised TSD the MPCA abandons the “prior unpermitted exposures” argument and now claims that the chronic health benchmark is appropriate because of the almost 4 years of TDCE usage prior to expected permit issuance, the 5-year term of the Re-Noticed Draft Permit, and the “undetermined future exposure” to TDCE after the 5-year term of the Re-Noticed Draft Permit. This is not an adequate justification for applying the chronic health benchmark rather than the sub-chronic level. The MPCA does not allege that any residents in the area surrounding Water Gremlin’s facility may in fact have sustained chronic exposure to TDCE, now or by the end of the term of the Re-Noticed Draft Permit. Indeed, based purely on Water Gremlin’s operations and the variabilities of wind transport as demonstrated by the ambient air monitoring data collected by Water Gremlin for the last 3-4 years, it is not possible for any off-site person to be continuously or even consistently exposed to emissions from the Water Gremlin facility to the extent of a chronic exposure.²³ Furthermore, the receptors used for modeling and the ambient monitors use their locations as proxy for a theoretical receptor’s exposure concentration, but people do not live or spend significant time in the location of the monitors or the nearest boundary to the facility. MPCA thus inappropriately equates a theoretical receptor’s hypothetical exposure concentration to the nearby residents’ actual exposure.

For these reasons, it is more appropriate to use USEPA’s PPRTV sub-chronic reference concentration for TDCE, described above, as the basis for the Company’s air emissions permit limit.

(c) RASS Adjustments

In the Originally-Noticed Permit, the MPCA adjusted the facility emission rate downward in Water Gremlin’s Screening RASS so that the final endpoint-refined hazard index for TDCE calculated specifically to 1.00. In addition to evaluating individual emissions, the MPCA routinely calculates a facility-wide hazard index through the RASS, in which it assigns values to the hazards associated with each pollutant emitted to derive a total numeric value for the facility. This becomes the “Facility-wide Endpoint Hazard Index for the Facility,” and can result in adjustments to emissions limits over-and-above those that would be allowed on a pollutant-by-pollutant basis. Minnesota Rule 4717.8600 describes the procedure for calculating a facility’s hazard index. Subpart 2(D) states: “A hazard index of one or less indicates a combined concentration of chemicals unlikely to cause an adverse health effect to the general public.” Because this is an inherently crude and overprotective exercise, the MPCA’s normal process is

²³ In fact, Monitor 4 – the ambient monitor with the highest average readings over the multi-year monitoring period – reads as “non-detect” over half the time. Thus it will be several years after the permit term before any individual could conceivably have eight years of total exposure (much less continuous exposure). Consequently, the MPCA’s fallback argument that an individual could be chronically exposed to TDCE within the permit term is factually incorrect.

March 3, 2023

Page 13

to calculate to one significant digit. In practice, values between 1.01 and 1.49 round to 1, and values between 1.51 and 1.99 round up to 2. Water Gremlin's facility-wide endpoint hazard index, even using MDH's RAA, would round to 1, and at that level Water Gremlin's emissions limits would require no further adjustment. Under this calculation, Water Gremlin's facility-wide emissions limit for TDCE would have been 51.2 tpy.

MPCA departed from this practice in the Originally-Noticed Permit, refusing to allow any rounding for a facility-wide Hazard Index, and furthermore applied a TDCE-specific endpoint hazard index of 1.0 (no rounding).²⁴ As a result, Water Gremlin's TDCE emissions limit was lowered to 38.7 tpy, which was then subjected to application of a further safety margin for a final limit in the Originally-Noticed Permit of 32.6 tpy. The Company pointed out in our prior comments that we were not aware of any prior example of the MPCA rejecting rounding of the endpoint hazard index. At the time, the MPCA's justification for this departure from its normal practice was that ambient monitoring at the Water Gremlin facility allegedly showed that the modeling was under-predicting air concentrations. This is incorrect. In fact, as discussed further below, Water Gremlin's ambient monitoring shows that TDCE concentrations (365-day rolling averages) have been consistently *below* the unpromulgated RAA level of 20 µg/m³ for the past two years of monitoring.²⁵ Regardless, MPCA's refusal to allow any rounding for Water Gremlin was contrary to law and represented an invalid unpromulgated rule because it would have "general applicability and future effect," yet it was not based on any clear statutory authority or longstanding agency practice.²⁶

In the updated TSD accompanying the Re-Noticed Draft Permit, the MPCA abandons the RASS protocol altogether. In Section 3.6.2.3 of the TSD, the MPCA states that the RASS protocol does not produce results that match ambient monitoring, and therefore it now declines to use the RASS process for TDCE at all. Instead, as discussed further below, the MPCA relies on ambient monitoring data to arrive at the exact same 32.6 tpy TDCE limit.

In addition to the scientific errors in this process as described below, the MPCA's new approach is contrary to law. Minn. R. 4717.8600 Subp. 1 provides that "[w]hen simultaneous exposure is evaluated for multiple toxicants with noncarcinogenic effects, a hazard index ***must*** be calculated using the procedure in this part." (Emphasis added). Here, the MPCA continued to use the RASS process for all other non-carcinogenic toxicants, but peeled off TDCE and used an entirely different, first-of-its-kind approach. The stated rationale is the existence of monitoring

²⁴ TSD at § 3.6.2.2.

²⁵ Despite a brief period where the 365-day rolling average for a single monitor (the agency does not use readings from all of the monitors) was calculated to be above 20.0 µg/m³, the current individual 365-day rolling average is well below that level (11 µg/m³ Monitor ML4W, period ending February 14, 2023). The other four monitors are all currently less than 10 µg/m³ on a 365-day rolling average basis. Monitor 4 is typically the highest of the five monitors and its 365-day rolling average has been below 20 µg/m³ since December 29, 2021. Notwithstanding the above noted results, the 365-day rolling average is not an appropriate time duration to compare against a chronic toxicity value.

²⁶ See *In re Shakopee Mdewakanton Sioux Cmty.*, 2023 Minn. App. LEXIS 34 (February 27, 2023).

March 3, 2023

Page 14

data that the MPCA believes is more accurate than the RASS process for TDCE (and TDCE-only), but Minn. R. 4717.8600 does not afford the MPCA that discretion. This new approach is thus both contrary to existing law and constitutes unpromulgated rulemaking.

This is an even greater departure from Agency practice than the rounding issue in the Originally-Noticed Permit. As discussed above, in the Originally-Noticed Permit, the MPCA attempted (albeit in a flawed manner) to reconcile the differing results produced between ambient monitoring and modeling. In the Draft Permit, the MPCA simply discards modeling in favor of ambient monitoring. This is scientifically invalid for a number of reasons. First, the ambient monitors are located on the property, and therefore would be *expected* to produce higher results than modeling, which is intended to estimate off-property receptor exposure. Thus the observed differences between the modeling and ambient monitoring tend to *validate* rather than undercut the modeling results. Second, the RASS modeling is more comprehensive than ambient monitoring, covering every hour of every day for five years at all locations, in contrast to the more limited sampling times and locations taken with ambient monitoring. Finally, modeling and ambient monitoring measure different things. Modeling is focused on the emissions of the facility, while monitoring measures all sources impacting the monitor. The MPCA contends that there are no other known sources of TDCE in the area, but it has made no known investigation of other possible sources to validate this claim. This was a flawed assumption when the MPCA was attempting to reconcile the differing results of monitoring and modeling – it is even more so now that the MPCA has at the eleventh hour rejected modeling altogether.

(d) Use of Ambient Monitoring to Further Adjust Limit

In the Originally-Noticed Permit and accompanying TSD, MPCA made a further reduction to its proposed TDCE limit, in an apparent attempt to calibrate the limit derived from its risk modeling procedure described above (38.7 tpy) further downward by using the ambient monitoring data that had been generated over the prior two-plus years. This was transparent reverse engineering to achieve a pre-determined result. Specifically, the ambient monitoring data showed a brief period (between approximately November 9, 2021 and January 8, 2022) wherein the 365-day rolling mean TDCE concentration was in excess of MDH's RAA of 20 $\mu\text{g}/\text{m}^3$. MPCA paired the 365-day rolling VOC tracking required by the Administrative Order with this data and determined that the 365-day rolling emissions total, when the ambient monitors demonstrated a 365-day mean concentration above 20 $\mu\text{g}/\text{m}^3$ (November 9, 2021), was approximately 32.6 tpy VOCs (as of November 6, 2021). MPCA used this pairing to arrive at its adjusted TDCE limit of 32.6 tpy, citing the approximate 16 percent reduction (i.e., from 38.7 tpy to 32.6 tpy) as "appropriate based on the weight of the evidence provided by actual ambient air measured concentrations of t-DCE around the facility and the associated t-DCE usage at the facility."

Water Gremlin leveled several objections to this adjustment in our comments on the Originally-Noticed Permit, and reiterates those objections here because the MPCA continues to rely on this same ambient monitoring data to arrive at the 32.6 tpy limit. The method used by MPCA is wholly arbitrary and amounts to an indefensible leap, which the agency did not sufficiently justify even in its attempt to backfill the TSD provided with the Re-Noticed Draft

March 3, 2023

Page 15

Permit. There is no linear relationship or direct connection between TDCE usage (tons per year) and ambient concentration (micrograms per cubic meter). While partially dependent on emission levels, the concentrations observed at any one ambient monitor location or point in time are also a function of wind speed and direction for the time-period of interest. The inability to scale stack emissions directly to ambient concentrations is why risk modeling is normally conducted using a USEPA-approved dispersion model coupled with five years of National Weather Service hourly weather observations. The variability in weather patterns possible for a given area are deemed to be sufficiently represented by five years of representative hourly weather data. Using such data under MPCA's typical risk modeling procedures, the maximum calendar year average result for any one receptor in the grid (among hundreds or thousands) is then used as a surrogate for maximum exposure and limits are set on this basis.

MPCA's reliance on ambient monitoring data is further cast into question due to other occasions whereby 365-day VOC usage levels in excess of 32.6 tpy resulted in 365-day rolling concentrations well below 20 $\mu\text{g}/\text{m}^3$ (e.g., Summer 2021, Summer 2022). Using MPCA's pairing method, one could infer that higher usage levels could be supported at different times of the year. This is not being proposed by Water Gremlin; instead, it simply shows that MPCA's arbitrary selection of one monitoring event to set an annual limit is not defensible.

MPCA states that it "must be noted that there are no other known sources of t-DCE around the Water Gremlin facility other than Water Gremlin itself." We do not know the basis for this conclusion, and at any rate it does not negate the possibility that such sources exist. For example, reviewing MPCA's 'What's In My Neighborhood' tool, various hazardous waste licensees are located in the region. It is certainly likely that such businesses ceased usage of TCE under Minnesota's ban and found TDCE as an acceptable alternative based on prior guidance by MNTAP to businesses, in exactly the same manner as occurred with Water Gremlin. The MPCA's presumption that there are no other sources is therefore unsound.

In the updated TSD, the MPCA continues to defend the 16 percent safety factor, asserting that the presence of other TDCE emitters in the area would tighten, not loosen, limits imposed on Water Gremlin. This new rationale is problematic in that it simply assumes that any other emitters can freely emit without regulations on themselves. Second, it confuses the issues. Whether or not other emitters would get a free pass and Water Gremlin's permit would bear all the emission limits, it would provide another explanation why monitoring and modeling produce different results, and invalidate the MPCA's factual and scientific basis for entirely rejecting modeling in favor of monitoring. The references to the 16 percent safety factor in the updated TSD remain as arbitrary as in the original TSD, and are not a supportable basis to justify the proposed 32.6 tpy TDCE limit.

4. There is No Basis to Double-Adjust for Any Modeling/Monitoring Discrepancy

Critically, the MPCA is engaged in blatant double-counting in imposing the additional safety factors described above. The *only* justification given in the updated TSD for departing from the Agency's normal practice in rounding of the Endpoint Hazard Index is the alleged

March 3, 2023

Page 16

discrepancy between ambient and modeled concentrations. But as discussed in Section 3 above, even if true (which Water Gremlin disputes), the MPCA has separately attempted to address that discrepancy by applying an additional 16% adjustment to the modeled concentrations. The MPCA cannot have it both ways. It can attempt to correct the alleged modeling discrepancy by attributing all “extra” monitored TDCE to Water Gremlin, but once it has done so, it has no further justification for discarding normal practice in Endpoint Hazard Index rounding. While there is little basis to customize the Endpoint Hazard Index, and there is little basis to apply a 16% safety factor to modeled data, there is absolutely *zero* basis to make both adjustments to the same permit.

5. Compounding Safety Factors Included in Proposed TDCE Limit

As we did in our comments on the initially-noticed permit, Water Gremlin believes it is important, in order to put these comments and the Company’s TDCE emissions in context, to describe the many compounding safety factors that are incorporated in the risk assessment process generally and in the Re-Noticed Draft Permit specifically.

First, the USEPA’s chronic oral reference dose for TDCE of 0.02 mg/kg-day includes an adjustment of the dose downward by the application of uncertainty factors to account for limitations in the database such as: inferring the effects of chronic exposure from a subchronic study; animal study to humans; variability and sensitivity of the human population; and number and quality of available studies. As a result, the USEPA’s chronic oral reference dose of 0.02 mg/kg-day is **3,000 times LOWER** than the lowest exposure levels that produced a response in the experimental animals.

Second, in developing its RAA, the MDH did not use the 0.02 mg/kg-day oral reference dose from USEPA IRIS, but instead used a reference dose of 0.005 mg/kg-day, based on guidance from CalEPA. This is 4 times lower than the USEPA IRIS value.

Third, in the RAA, MDH relied on RTR extrapolation of oral to inhalation data, when USEPA had already published a peer-reviewed inhalation Reference Concentration (PPRTV RfC) not premised on RTR extrapolation. Although the MDH claims otherwise, it is very much unclear whether the agency considered the USEPA PPRTV RfC until Water Gremlin pointed it out in April of 2022.²⁷

²⁷ The MDH RAA and MPCA risk assessment documentation was devoid of any discussion of the USEPA’s 2020 PPRTV, even though they try to backfill this gap in the MDH internal memo of July 13, 2022, provided as an attachment to the TSD. At best, this was agency oversight. We reaffirm our request that all records, notes, memoranda, e-mails, and other documentation in the files of the MPCA and MDH regarding the RAA and RASS be included in the permit record. This would include, but is not limited to, written or documentation oral communications, e-mails or other correspondence between MDH and/or MPCA and any other federal, state or local governmental agency or institution regarding the risk assessment for TDCE.

March 3, 2023
Page 17

Fourth, the MPCA applied a chronic health benchmark value, which incorporates a safety factor of 10 times below the sub-chronic value, despite failing to demonstrate that any individual will experience a chronic exposure as a result of the Re-Noticed Draft Permit and/or the Company's historic or future use of TDCE.

Fifth, MPCA did not rely on modeling and the RASS protocol to determine the ultimate limit, per past practice, but instead erroneously identified a facility TDCE limit based on selective ambient monitoring data. This resulted in an additional 36 percent reduction in the overall facility TDCE limit (51.2 tpy to 32.6 tpy).

In sum, under the agency's application, there is no objective consideration of actual risk. Rather, there is simply an unfounded additive and at times expressly duplicative compounding of safety factors at all stages of the analysis, resulting in an overstated risk and unreasonable and unsupported limitations on Water Gremlin's operations.²⁸

6. Water Gremlin Alternative Proposal for TDCE Limit

As noted above, before the Re-Noticed Draft Permit was originally published in July 2022, the Company (consistent with numerous air permit actions between regulated parties and the agency) proposed an alternative compliance schedule under which the Company would invest significant capital to transition to UV coaters that do not use TDCE-containing solvents. This plan would have resulted in **lower** overall TDCE emissions throughout the life of the permit and beyond. The MPCA rejected this proposal, without a proper factual basis. This alone creates both a factual and legal basis for the MPCA to grant a contested case hearing with respect to the Re-Noticed Draft Permit, as described further in the Petition.

The MPCA complains in its revised TSD that the Company submitted several different iterations of modeling results in advance of the initial Re-Noticed Draft Permit public notice in July 2022. This is not a valid reason to reject Water Gremlin's proposed TDCE reduction plan. Many of the modeling runs submitted to MPCA were *requested* by MPCA, or had to be updated and resubmitted due to the changing standards applicable to the facility. Both Water Gremlin and the MPCA brought forth changes to requirements and/or operations that necessitated new modeling, but this was never intended, at least by the Company, to be used as a tool to slow down the process. In fact, it was Water Gremlin that incurred huge time and cost burdens in response to agency requirements and demands for additional monitoring and modelling.

Furthermore, Water Gremlin objects to MPCA's implication throughout the TSD and in public meetings that it is somehow Water Gremlin's fault that it has taken the agency so long to get the Re-Noticed Draft Permit to the public notice stage, or that Water Gremlin is violating any

²⁸ While safety factors are used in the development of a regulatory threshold that are protective of health, they must be grounded in proper rulemaking and procedure involving all stakeholders. The use of large and arbitrary safety factors must be avoided. Otherwise, the result is an extrapolation that drives the risk threshold to overly protective threshold values devoid of any rational basis.

March 3, 2023

Page 18

enforceable limit on TDCE at this time. Water Gremlin has cooperated and complied with all inspections, recordkeeping, and recording requirements since its voluntary self-reporting of TCE emissions in 2018. The Company is not violating any permit limit, Stipulation Agreement, or Administrative Order requirement by continuing to use solvents for coating during the pendency of the Re-Noticed Draft Permit.

C. Monitoring Requirements

The Re-Noticed Draft Permit imposes three levels of emissions monitoring for TDCE: (1) modeling inventory tracking and management of TDCE, (2) in-stack monitoring, and (3) ambient monitoring. In general, the MPCA's stated rationale for the ongoing monitoring requirements is that the facility is operating at or near the 20 µg/m³ TDCE limit proposed in the Re-Noticed Draft Permit, therefore additional monitoring is required to ensure there are no exceedances in the future. This rationale is not valid for several reasons. The in-stack and ambient monitoring requirements are not required or necessary to demonstrate compliance, and provide no additional benefit in terms of human health or agency oversight. The Company has agreed to the MPCA's recommended gold standard of detailed inventory tracking and traceability of TDCE usage, along with audits as necessary.

1. In-Stack Monitoring Requirements

The in-stack monitoring required under the Re-Noticed Draft Permit serves no legitimate purpose, particularly in light of the high cost of this type of monitoring. Rather than accurately monitoring TDCE emissions, the in-stack continuous emissions monitoring system ("CEMS") measures total hydrocarbons, and attributes *any* molecules containing carbon toward a concentration as TDCE emitted. For this reason, the CEMS frequently overstates TDCE emissions. As an example, the Pace Analytical lab report from February 13, 2023 reported results from 5:30-6:00 am, when no coating operations (or solvent usage) were taking place, yet total hydrocarbons as TDCE emissions were reported. Rather than there being TDCE emissions during periods of non-operation, the CEMS was likely capturing products of combustion from heating the building instead. By contrast, inventory tracking and management results in clear monitoring and record keeping of actual TDCE use and emissions, and is a standard compliance mechanism under the Clean Air Act.'

The MPCA argues that due to the minimal margin of compliance in the Re-Noticed Draft Permit, two levels of auditing are necessary on top of the standard detailed inventory requirements: (1) quarterly audits of purchasing and inventory records, and (2) continuous in-stack monitoring via the CEMS. The Company does not take particular issue with the quarterly auditing requirement. The MPCA argues that the CEMS will provide a real-time audit of the Company's inventory and purchasing records, which ambient monitoring cannot provide. However, the in-stack monitoring is less accurate than the inventory controls it is supposedly checking. Further, the Re-Noticed Draft Permit requires that if an aberrant CEMS reading is collected, the Company must review the recordkeeping and auditing that it is *already doing* to identify the source of the issue. Thus the MPCA's justification that the CEMS is necessary to

March 3, 2023

Page 19

trigger an audit in the case of an abnormal reading is invalid because the Company will already be conducting such audits. Further, in the nearly 4 years that the Company has been collecting CEMS data pursuant to the Administrative Order, not one reading was removed from the data set MPCA used to generate the correlation equation. This implies MPCA found all the data points to be valid for statistical analysis—i.e., that the Company’s recordkeeping reliably predicted emissions and that there were no deviations in the CEMS data. And because the Company will already be subject to quarterly audits, there is *no* reading that the CEMS could collect that would require the Company to do any audit that is not already required under the permit. Water Gremlin expects to continue its operations and recordkeeping processes consistently with how they have been operating the past 4 years, during which MPCA has not raised any concerns about the veracity of Water Gremlin’s recordkeeping. The fact that the public may have unfounded concerns about the reliability of Water Gremlin’s recordkeeping practices is not sufficient justification for continuing to collect additional expensive data, when that data has demonstrated for 4 years that Water Gremlin’s recordkeeping practices are valid.

The MPCA further attempts to justify the CEMS requirement with information from the Minnesota Department of Commerce for grocers and large capacity scales, alleging that errors in weighing and inventory tracking can occur. These data are irrelevant to Water Gremlin’s operations and insufficient justification for imposing additional costly monitoring requirements on the facility. The audit requirement in the Re-Noticed Draft Permit is sufficient to identify errors in weighing that would skew the facility’s solvent usage reports. Further, the MPCA does not allege that weighing errors, if they were to occur, would skew in any particular direction—i.e., that errors in weighing or inventory tracking would result in a systematic under-counting of solvent usage such that emissions would be higher than estimated. Ultimately, the CEMS only introduces additional confounding and irrelevant information for which the remedy, if the CEMS correlation shows an issue, is an audit. The public and MPCA can rely on the usage tracking, which Water Gremlin is well trained in having to have done it for the past several years, audits, and inspections just like for any other emitting facility.

2. Ambient Air Monitoring Requirements

Section 5.1.53 of the Re-Noticed Draft Permit requires Water Gremlin to continue the ambient air monitoring that it has been conducting pursuant to the Administrative Order. There is no further need for ambient monitoring as the coating usage recordkeeping and inventory tracking can serve as appropriate compliance mechanisms for Water Gremlin, consistent with other permitted facilities. If MPCA has further concerns about community exposure in ambient air surrounding the facility, the agency should fund monitoring in actual ambient air, not on Water Gremlin property as is currently done. Indeed, the MPCA seems to recognize the limitations of ambient monitoring data due to the variability of wind transporting, when it acknowledges that there is “much wider variability on the relationship between t-DCE daily emission rates versus daily average t-DCE concentrations measured in ambient air due to the daily variability of meteorological conditions.”²⁹

²⁹ TSD at 40.

March 3, 2023

Page 20

The Re-Noticed Draft Permit contains provisions for discontinuation of ambient VOC monitoring at Permit Section 5.1.57. The MPCA attempted to revise this provision in response to the Company's prior comments, but it remains unworkable for several reasons and in fact disincentivizes Water Gremlin from reducing or eliminating solvent coating. First, the facility must continue ambient monitoring for at least 24 additional months once the permit is issued. However, shutdowns of the coating operations do not count toward this 24-month requirement, thus Water Gremlin is discouraged from stopping coating on any day other than weekends and holidays "when operation would normally stop," because doing so would extend the 24-month period before monitoring could be discontinued. This serves as a deterrent for Water Gremlin to reduce solvent coating operations, which is the Company's stated intention in its proposed transition to UV-cured coaters. Furthermore, Water Gremlin requested credit for having collected identical data for more than two years leading up to the Re-Noticed Draft Permit term, but the agency denied this request. Second, the statistical analysis required in order to discontinue ambient monitoring essentially adds an additional three layers of conservatism to the monitoring data without any basis or prior precedent: (1) it arbitrarily lowers the MDH RAA from 20 $\mu\text{g}/\text{m}^3$ to 16 $\mu\text{g}/\text{m}^3$; (2) it applies a 95% upper confidence limit on the mean instead of using the calculated mean, which will always push the result higher; and (3) it applies the chronic RAA value of 20 $\mu\text{g}/\text{m}^3$, which is intended to apply to a 8 year or more exposure, to a single year. Together, these requirements make it extremely difficult for Water Gremlin to discontinue the unnecessary and costly ambient monitoring that does not provide any additional protection to the surrounding community.

3. Daily Monitoring is Inherently Unnecessary

As demonstrated by the MPCA's responses to Water Gremlin's initial comments, the duplicative CEMS and ambient monitoring are based on a flawed premise – specifically that it is very important to maintain daily "checks" on inventory tracking and management, coupled with modeling. The MPCA's rationale is threefold, (1) that Water Gremlin will be operating with a "very small margin of compliance," (2) there is a possibility of operator error in inventory management, and (3) that any exceedances would result in an "unacceptable concentration of t-DCE that would impact health."³⁰ Therefore, the MPCA argues, it is necessary to maintain "daily data in real-time." This reasoning is completely contrary to the rationale for establishing permit limits based on chronic exposure. As the MPCA concedes, chronic exposure assumes an *average* exposure over a period of at least *eight* years up to a lifetime. As long as emissions do not cause ambient concentrations to approach the sub-chronic or acute benchmarks of 200 $\mu\text{g}/\text{m}^3$ or 400 $\mu\text{g}/\text{m}^3$, which no one is asserting is plausible at Water Gremlin, daily emissions are quite literally irrelevant. All that is necessary to protect public health is compliance with the average over the eight-year period. It is therefore simply false as a matter of science for the MPCA to assert that any particular daily or even repeated daily exceedances of the chronic exposure limit will have any adverse impacts to human health, so long as the long-term average is maintained. For that same reason, it is *not* necessary to tightly monitor daily emissions, or duplicatively check them with costly in-stack and ambient monitoring (especially considering the

³⁰ TSD Attachment 11 at § 2.

March 3, 2023

Page 21

years of existing data from both sources demonstrating compliance). In sum, the MPCA has set permit limits to protect from chronic exposure, but is demanding monitoring that would only be necessary to protect against acute or sub-chronic exposure. The entire rationale the MPCA has given for continuation of in-stack and ambient monitoring is inapposite to the permit the MPCA is actually proposing to issue.

Given the inherent unreliability of in-stack and ambient monitoring, the other oversight and superior monitoring measures included in the Re-Noticed Draft Permit, and the gap between actual emissions and the TDCE limit once the PPRTV sub-chronic RfC is applied, there is no added benefit of in-stack or ambient monitoring and these requirements should be eliminated.³¹

D. Comments on Specific Provisions of the Re-Noticed Draft Permit and TSD

Water Gremlin has reviewed the Re-Noticed Draft Permit and TSD in detail and provides its additional comments in the attached **Exhibits 2 and 3**. Specifically, **Exhibit 2** is a chart showing the Company's comments on the Originally-Noticed Permit and whether each comment was resolved in the Re-Noticed Draft Permit and whether Water Gremlin renews the comment. **Exhibit 3** sets forth specific comments on the language and requirements of the Re-Noticed Draft Permit as in-line comments in the actual permit document. We also incorporate by reference as part of the record in this matter Water Gremlin's prior comments and exhibits submitted to the MPCA on April 22, 2022 and August 19, 2022. Additionally, Water Gremlin incorporates by reference all of the MPCA summary notes, records, modeling data, communications and correspondence with the agency.

In the line-by-line comments on the Re-Noticed Draft Permit provided in **Exhibit 3**, the Company notes multiple areas where the MPCA has required more frequent and/or precise testing or equipment calibration than is justified by the science or circumstances. For example: stack testing every single smog hog stack despite the attendant processes being similar and the control method being identical; stack testing at extensive and unnecessary intervals; annual scale calibration (Permit Requirement 5.2.8) and reporting coating usage to 6 decimal places (Permit Requirement 5.1.14), even though the scale's calibration would indicate only 4 significant figures are justified; and carbon filter replacement frequency. Each of these

³¹ As a further example of the MPCA's overreach on monitoring, the Re-Noticed Draft Permit appears to require daily checks on at least some of the HEPA filters associated the Nederman collection units. Water Gremlin pointed out in our prior comments that such daily checks are not recommended or required, and in fact could lead to filter damage, but the MPCA did not fully resolve this issue in the Re-Noticed Draft Permit. In addition to eliminating the requirement for daily checks, the Company requests that the filter requirement be amended to refer to a generic specification (i.e., a HEPA filter), rather than the specific Nederman brand name. Although the Company currently has Nederman machines deployed in the facility, Water Gremlin should have the option to replace the filters within these machines or the machines themselves with an equivalent HEPA filter without requiring a permit amendment. Amending the permit to substitute a different brand of filter would needlessly consume Company and agency resources.

March 3, 2023

Page 22

requirements greatly exceed industry-standard frequency and precision. Each requirement is individually unjustified, but the cumulative burden of all these provisions is far in excess of anything required of other permittees or can be rationalized on a benefit-burden basis. Consequently, these provisions and should be modified as indicated in the line-by-line comments.

Additionally, seemingly random additional requirements have been added to the Re-Noticed Draft Permit that were not included in the version noticed last July. For example, the Re-Noticed Draft Permit appears to include new requirements on lead alloy tracking, without justification or explanation. At various points during the development of the Permit, MPCA has raised questions about the various alloy metals (e.g., antimony, tin) in the lead ingots received by Water Gremlin for processing. On each occasion, both the MPCA and Water Gremlin have assumed for modeling and compliance purposes that the incoming ingots are 100% lead, because lead has the lowest risk and hazard thresholds of any of the alloy metals. As a result, assuming the ingots are 100% lead is the most conservative possible assumption, and the Company's compliance with the lead emissions requirements is fully protective of any emissions of the alloys. The Company had thought this issue had been laid to rest because alloy tracking was not included in the draft permit originally noticed in July 2022. Inexplicably, alloy tracking has now been proposed in the Re-Noticed Draft Permit. The Company does not understand why it has resurfaced. In addition to serving no public health purpose, tracking alloys separately unduly complicates and increases the costs of inventory tracking, recordkeeping, and auditing. There is some irony in the fact that in an area where the Company has agreed to the most conservative assumption, the MPCA now proposes to reject that assumption and compel the Company to needlessly complicate and spend additional resources on the subject. The newly-proposed lead alloy tracking should be dropped and lead tracking should be returned to the protocols incorporated in the prior draft version of the permit.

II. Conclusion

On behalf of Water Gremlin, we provide these comments on the Re-Noticed Draft Permit and incorporate the full record in this matter, including all documents, communications and materials of the MPCA, MDH, other state agencies and any third parties who worked on the Re-Noticed Draft Permit, risk assessment, health benchmarks and related information. We request that the agency take appropriate steps to preserve and retain all such materials as part of the record, in connection with any further proceedings.

Very truly yours,

DORSEY & WHITNEY LLP



Mark R. Kaster
Michael R. Drysdale

March 3, 2023
Page 23

Enclosures:

Exhibit 1 – Petition for Contested Case Hearing

Exhibit 2 – Spreadsheet Summary of Water Gremlin Comments on July 2022 Draft Permit and January 2023 Re-Noticed Draft Permit, and Status of Comment Resolution

Exhibit 3 – Line-By-Line Comments on Re-Noticed Draft Permit

Exhibit 4 – Stantec Technical Memorandum and Supplemental Technical Whitepaper from Dr. Deborah Gray

cc: Minnesota Attorney General's Office, Colin O'Donovan

Exhibit 1

**BEFORE THE
MINNESOTA POLLUTION CONTROL AGENCY**

))
))
In the Matter of Water Gremlin Company) **Case No.** _____
Draft Air Emission Permit No. 12300341-101)
))

**Water Gremlin Company’s Petition For A Contested Case Hearing
Pursuant to Minn. Stat. Ch. 14 and Minn. R. 7000.1800 and 7000.1900**

Commissioner Katrina Kessler
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

TO THE MINNESOTA POLLUTION CONTROL AGENCY:

Water Gremlin Company (“Water Gremlin” or the “Company”), by and through its undersigned counsel, hereby petitions the Minnesota Pollution Control Agency (“MPCA”) for a contested case hearing pursuant to Minn. Stat. Ch. 14 and Minn. R. 7000.1800 and 7000.1900.

I. INTRODUCTION

1. Water Gremlin is the world’s technological and market leader in the manufacture of lead battery terminals (used in most every car, truck, bus, recreational vehicle, industrial products and military equipment that incorporates a battery) and recreational fishing products.¹ The Company operates a 160,000 square foot manufacturing and warehousing facility at 4400 Otter Lake Road in White Bear Township (the “Facility”). The Facility is currently operating

¹ Water Gremlin uses recycled lead materials in its manufacturing process. This is lead material that would otherwise likely end up in a landfill, thus promoting recycled usage rather than disposal in keeping with the State’s preferred waste management hierarchy. MN Stat. 115A.02.

under an air permit issued by the MPCA in 2006, as well as a March 1, 2019 Stipulation Agreement signed by Water Gremlin and the MPCA (“Stipulation Agreement”) and a unilateral January 17, 2020 Administrative Order issued by the MPCA (“Administrative Order”).

2. Water Gremlin filed an application for a Major Permit Amendment on October 23, 2018 (“Permit Application”), and filed several rounds of supplemental information with the MPCA in the 2019-2022 time-period. Following receipt of Water Gremlin’s Permit Application, the MPCA publicly stated its conclusion (well prior to any factual consideration of permit terms and conditions) that the agency intends to impose the most stringent permit possible.²

3. On July 20, 2022, the MPCA published Preliminary Draft Air Emission Permit No. 12300341-101 (“Originally-Noticed Permit”) for public notice and comments. Water Gremlin believes that the predicate instruction to staff (and we believe to the Minnesota Department of Health) to issue the most stringent permit possible led to a number of assumptions, misstatements and misapplication of facts in the Originally-Noticed Permit, as the Company pointed out in detailed comments and a Petition for Contested Case Hearing filed August 19, 2022.

4. On February 1, 2023, apparently in response to the Company’s comments on the Originally-Noticed Permit and Petition, the MPCA placed on public notice a revised Preliminary Draft Air Emission Permit No. 12300341-101 (“Draft Permit”) and accompanying Technical Support Document (“TSD”). Together, the Draft Permit and TSD total more than 2,000 pages. In the Draft Permit and TSD, the MPCA accepted very few if any of Water Gremlin’s substantive comments and proposed revisions, and instead used the re-noticed Draft Permit and TSD as an

² Assistant Commissioner Craig McDonnell’s comments at a MPCA public meeting regarding Water Gremlin on December 10, 2020.

opportunity to replace some justifications with new ones and add additional justifications in an apparent attempt to shore up its own legal exposure for a potential contested case and/or appeal.

5. Among other things, the Draft Permit includes a Facility limit for annual emissions of the chemical *trans*-1,2-Dichloroethylene (“TDCE”) of 32.6 tons per year. TDCE is an industrial solvent that Water Gremlin began using in 2019, based on the recommendation of the MPCA that Water Gremlin consult with the Minnesota Technical Assistance Program (“MNTAP”) at the University of Minnesota about potential safe and effective replacements for Water Gremlin’s prior industrial solvent, trichloroethylene (“TCE”),³ and MNTAP’s identification of TDCE as such a replacement. TDCE is manufactured and widely used by some of Minnesota’s largest companies and has never been classified as a hazardous air pollutant under the Clean Air Act.⁴

6. Since the Permit Application, and without any new toxicological studies, the MPCA has serially revised the proposed emission limits downward, starting at a proposed 90 tons per year (“tpy”), then 52 tpy, then 38.7 tpy, then 35 tpy, and finally the current proposed limit of 32.6 tpy. The MPCA calculated the current 32.6 tpy TDCE limit in the Draft Permit based on 2020 Risk Assessment Advice (“RAA”) from the Minnesota Department of Health (“MDH”). The RAA recommends a sub-chronic inhalation health benchmark for TDCE of 200 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), and a chronic inhalation health benchmark of 20 $\mu\text{g}/\text{m}^3$. This RAA has not been promulgated into state rule or peer reviewed, and neither Water Gremlin

³ Water Gremlin voluntarily agreed to change its operations to phase out TCE and transition to TDCE well before the state legislature enacted a law eliminating certain uses of TCE by companies operating in Minnesota. *See* Minn. Stat. § 116.385.

⁴ *See* TDCE safety profile information such as that from 3M. 3M, “t-DCE: A safe, sustainable component in 3M Novec cleaning solutions,” (June 2021), <https://multimedia.3m.com/mws/media/811521O/trans-dce-trans-dichloroethylene.pdf>. According to 3M, the safety profile of TDCE has been well characterized over the past 25 years.

nor the public were afforded the opportunity to comment on the RAA before it was implemented in the Draft Permit. Importantly, the in-house MDH RAA is **not based on studies regarding inhalation of TDCE** (the exposure pathway relevant to Water Gremlin’s permit), but instead is based on an ingestion-to-inhalation (“route-to-route” or “RTR”) **extrapolation** of a chronic **oral** reference dose of TDCE developed by the State of California. Over the objections of Water Gremlin, the MDH and MPCA used this route-to-route extrapolated value rather than the United States Environmental Protection Agency’s (“USEPA”) 2020 published Provisional Peer-Reviewed Toxicity Value (“PPRTV”) reference concentration for TDCE, which is based on USEPA’s review of inhalation toxicity studies and the agency’s risk evaluation protocols.⁵ As described further herein, MPCA used incorrect and unrepresentative factual data and applied that formulation in the Draft Permit for Water Gremlin.

7. Contrary to Minnesota Rules and agency guidance, the MPCA applied the MDH RAA *chronic* inhalation health benchmark for TDCE to determine the overall annual Facility emissions limit in the Draft Permit, rather than the *sub-chronic* inhalation health benchmark. Under Minn. R. Ch. 4717 and MDH guidance, air guidance values are developed to protect human health for a specific length of exposure. Sub-chronic exposure is defined as a period of more than 30 days, up to ten percent of a person’s lifetime, or approximately eight years. In contrast, chronic exposure is an exposure over a period of greater than eight years, up to an entire lifetime.⁶ MPCA’s sole justification in the Originally-Noticed Permit for applying the chronic exposure standard was Water Gremlin’s historic use of TCE, and therefore the TCE-TDCE

⁵ U.S. Environmental Protection Agency, “Provisional Peer-Reviewed Toxicity Values for *trans*-1,2-Dichloroethylene,” (Sept. 2020), <https://cfpub.epa.gov/ncea/pprtv/recordisplay.cfm?deid=349934>.

⁶ Minnesota Department of Health, “Air Exposure Durations,” (April 2020), <https://www.health.state.mn.us/communities/environment/risk/docs/guidance/air/airdurations.pdf>.

combination resulted in a chronic exposure duration. At the same time, however, MDH acknowledged that there is no known cumulative interaction between TDCE and prior TCE exposure. When Water Gremlin raised these objections to the Originally-Noticed Permit, the MPCA abandoned the TCE-TDCE combination argument, and now contends that if TDCE exposure is measured from the inception of Water Gremlin's usage in 2019, time-of-exposure will reach the eight-year threshold for a chronic exposure by the end of the Permit term. If this was correct, it would have been equally correct at the time of the Originally-Noticed Permit, and therefore it is a purely post-hoc justification. It is also not factually correct. As discussed at Paragraph 28 *infra*, it is not physically possible for any member of the community to meet the conditions for chronic exposure by the end of the permit term. Consequently, the chronic exposure assumption is invalid.

8. Separately from the use of chronic exposure levels, the MPCA further adjusted the emission rate downward in Water Gremlin's Screening Risk Assessment Spreadsheet ("RASS"), so that the final endpoint-refined hazard index for TDCE calculates specifically to 1.00. This is contrary to well-established, standard MPCA practice. The MPCA alleges that this was necessary in the context of Water Gremlin because of the results of ambient monitoring conducted for TDCE at the Facility, specifically on the basis that such monitoring has allegedly shown periodic exceedances of the unpromulgated RAA level of 20 $\mu\text{g}/\text{m}^3$ on a rolling average basis. In fact, Water Gremlin's ambient monitoring shows that TDCE concentrations (365-day rolling averages) have been consistently below the unpromulgated RAA level of 20 $\mu\text{g}/\text{m}^3$ for the past two years of monitoring.⁷

⁷ Despite a brief period where the 365-day rolling average for a single monitor (the agency does not use readings from all of the monitors) was calculated to be above 20.0 $\mu\text{g}/\text{m}^3$, the current individual 365-day rolling average is well below that level (12 $\mu\text{g}/\text{m}^3$ Monitor 2, period ending February 26, 2023). The other four monitors are all

9. In addition to the above calculations, the MPCA reduced the Facility TDCE emissions limit in the Draft Permit by a further 16 percent based on the same monitoring data, alleging that the modeling was under-predicting air concentrations. The MPCA has therefore double-adjusted Facility emission limits based on the same data: (1) first departing from agency practice with respect to the endpoint hazard index, and (2) again reducing the emissions limit because modeling allegedly under-predicts ambient concentrations. This is in spite of MPCA's requirement that Water Gremlin complete extensive modeling using MPCA-standard methods and maintain a strict tracking of all TDCE purchased and used at its facility. Water Gremlin disputes the agency's process and claims, and there are genuine issues of material fact regarding the agency's multiple assumptions, use of processes and methodologies, and application of unpromulgated standards based not on established procedures, but on the agency's pre-determined conclusions that it would impose the most stringent permit conditions it could conjure on Water Gremlin's operations.⁸

10. The basis for Water Gremlin's petition is that the MPCA's proposed Facility limit for TDCE is without a factual foundation, was arbitrarily derived and is being applied to the Water Gremlin Facility using a combination of methods and factual conclusions that are contrary to MPCA and MDH regulations and guidance and the scientific record. Water Gremlin proposes

currently less than 10 ug/m³ on a 365-day rolling average basis. Monitor 4 is typically the highest of the five monitors and its 365-day rolling average has been below 20 ug/m³ since December 29, 2021. Notwithstanding the above noted results, the 365-day rolling average is not an appropriate time duration to compare against a chronic toxicity value.

⁸ As the MPCA is fully aware, there are many reasons for ambient monitoring results to be higher or lower than modeled results, including for example, differences between modeled short-term weather conditions and actual weather conditions and/or contributions from sources beyond the facility. The data over the short term does not correlate to use of the 365-day rolling average monitoring data in the way presented by the MPCA. For example, the maximum 365-day rolling average from five monitors was 14.4 ug/m³ (Monitor 4) for the period ending August 12, 2022. The 365-day total VOC usage for the same August 12, 2022 end date was 33.1 tons.

to put forward experts and evidence demonstrating that the MPCA and MDH's TDCE value is improper and not supported by substantial evidence, including testimony from toxicologists and air emission modeling experts.⁹

11. In discussions with the MPCA regarding the pre-publication version of the Draft Permit, and in corporate written comments and commitments on the Originally-Noticed Permit, Water Gremlin proposed an alternative, enforceable, graduated emissions schedule, that would result in a **net reduction** in emissions of TDCE over the five-year term of the permit and a permanent reduction should Water Gremlin seek to renew the permit. Water Gremlin's proffered emissions schedule was structured to provide for emissions of 38.7 tpy and 36.5 tpy respectively for the first two years of the permit (but still within the MDH RAA guidance), followed by reduced emissions well below the proposed permit limit for the remaining years and resulting in a net reduction of TDCE emissions over the five year permit term. This proposal was specifically directed to facilitate Water Gremlin's transition to ultraviolet-based coatings in its "Gremlin Green" environmental program, thereby **reducing** TDCE consumption well below even the erroneous risk levels used to establish the draft permit limits. The MPCA rejected the proposal prior to publication of the Originally-Noticed Permit, without a factual basis, and has again rejected it in the Draft Permit. Critically, the MPCA does not dispute in any way that the reductions in net TDCE emissions are obtainable and verifiable, but rather resorts to a formalistic argument that it cannot even consider the proposal unless submitted in a certified Permit Application, and there is some unspecified reason why issuance of the Permit (which the agency

⁹ Water Gremlin has engaged Dr. Deborah Gray as a consulting toxicologist. Dr. Gray's curriculum vitae was previously provided to the MPCA in prior comments on the Draft Permit submitted on April 22, 2022, which materials are incorporated herein by reference. Water Gremlin has also engaged modelling experts from Stantec, including Mr. Jared Anderson. Both Dr. Gray and Mr. Anderson would be expected to testify in the contested case proceeding.

chose to re-notice with numerous changes rather than taking action on the permit and prior petition for a contested case hearing) cannot be delayed any longer. Neither of these justifications are tenable.

12. Lastly, the Draft Permit imposes three levels of TDCE monitoring. The second of these levels – in-stack monitoring – serves no factual purpose not already established by tracking of TDCE purchases and daily usage and ambient monitoring, and is not scientifically justified. The MPCA contends that tracking of TDCE purchases and daily usage is subject to human error, but offers no credible explanation why such error is likely, or more importantly, why such errors, if they occur, would be systematically biased in a way to undercount actual emissions. Equally importantly, the in-stack monitoring is less accurate than the inventory controls it is supposedly checking, and the data from the in-stack monitoring is proposed to be used in manner that will simply duplicate other tracking and auditing.

13. Pursuant to Minn. Stat. Ch. 14 and Minn. R. Ch. 7000, Water Gremlin therefore requests that a contested case hearing be held on the issues listed below.

II. ISSUES TO BE REVIEWED

14. Water Gremlin raises the following factual issues for review at the contested case hearing:

- A. The scientific and factual justification for applying the MDH's RAA oral-to-inhalation extrapolated benchmark value to develop the Facility limit for TDCE emissions, rather than the USEPA's peer-reviewed inhalation PPRTV. This includes:
 - (1). Whether the MDH RAA is scientifically supportable; and
 - (2). Even if it is, whether the EPA PPRTV should take precedence as the more applicable, scientifically supported and justified, benchmark value.
- B. The scientific and factual justification for using a chronic (i.e., lifetime) inhalation health benchmark for purposes of determining the Facility limit for

TDCE emissions, based on either prior TCE emissions or the commencement of TDCE usage at the Facility in January 2019.

- C. The scientific justification for refusing to round Water Gremlin's final endpoint-refined hazard index for TDCE, consistent with MPCA policy in applying RASS evaluations.
- D. The scientific and factual justification for adding an additional 16 percent safety factor to the facility TDCE limit, based on the alleged under-predicting of emissions by the ambient monitoring system.
- E. The scientific and factual justification for rejecting Water Gremlin's proposed graduated, enforceable emissions reduction schedule.
- F. The scientific and factual justification for continuing in-stack monitoring, in light of inventory controls, modeling, and ambient monitoring. This includes the scientific basis for requiring daily, real-time testing in an allegedly chronic exposure context, and the factual basis, if any, for concluding that inventory controls are likely to systematically undercount actual usage and emissions. It also includes the factual basis for collecting data that is less accurate than the data being checked, and will only be used to duplicate existing tracking and auditing.

III. INTEREST OF THE PETITIONER

15. As the permit holder and applicant, Water Gremlin has a significant interest in obtaining a contested case hearing on the issues described above. The Facility TDCE emissions limit proposed in the Draft Permit would limit Water Gremlin's operations and its ability to serve its existing and future customers, and the ongoing monitoring requirements add significant cost to Water Gremlin, with no added benefit to the public.

IV. REASONS WHY A HEARING IS WARRANTED

A. There are Material Issues of Fact Regarding the Validity of the MDH RAA

16. The MDH based its initial 2020 RAA (MDH 2020a) on an oral-to-inhalation route-to-route conversion for TDCE, because at the time there was no EPA-approved reference concentration ("RfC") for TDCE. TSD Att. 9 at 5. The initial MDH RAA was extrapolated from the current (USEPA, 2010) oral reference dose (RfD) published on USEPA's Integrated Risk

Information System (IRIS) webpage. *Id.* at 1. MDH updated its RAA later in 2020 (MDH 2020b), cutting the proposed limit in half, based solely on updated Benchmark Dose Software (“BMDS”) modeling (i.e., there were no new animal or human toxicology studies). *Id.* MDH incorrectly asserts that in the absence of the RAA, Water Gremlin would have been allowed to emit TCDE “without a tDCE protective air limit.” *Id.* At the same time, “MDH acknowledges the limitations associated with RTR extrapolation.” *Id.* at 5.

17. The MDH Air Toxicological Summary for TDCE presents the equations the agency used to convert the CalEPA (2018) oral RfD to an air concentration. Although no appropriate references are cited for this conversion, MDH appears to have used a simplified formula and variable values from USEPA (1996) Soil Screening Guidance: Technical Background Document. Other than summarizing CalEPA’s rationale for revising the TDCE oral RfD for California’s Drinking Water Program, MDH does not explain what the acknowledged limitations of RTR extrapolation are, or what adjustments, if any, MDH made to account for those limitations. In addition, MDH’s RTR extrapolation has not been peer-reviewed.

18. Water Gremlin will offer expert testimony by qualified toxicologists and witnesses, on the following methodological errors and limitations of the MDH RAA:

- a. The Environmental Protection Agency very seldom engages in RTR extrapolation, because it is extremely difficult to perform such extrapolation reliably. The uncertainties associated with RTR extrapolation are often at least as great as the uncertainties, and magnify any limitations, associated with the underlying study on which the extrapolation is based.

- b. To perform a reliable oral-to-inhalation RTR extrapolation, there must be both an in-depth *understanding* and an in-depth *explanation* of the relative toxicokinetics of the chemical administered through the oral and inhalation routes. MDH itself recognizes that sufficient toxicokinetic information must be available to support any attempted RTR extrapolation.¹⁰ This is explained in detail in (EPA 1996, *Soil Screening Guidance, Appendix B*; and EPA 1994, *Methods of Derivation if Inhalation Reference Concentrations and Applications of Inhalation Dosimetry*). MDH cites neither of the documents, nor any other resources regarding the protocols for performing RTR extrapolation. As a result, there is no evidence in the record by which to evaluate MDH's understanding of and adjustment for the relative toxicokinetics of TDCE for the oral and inhalation routes. They are nothing more than vague assertions about "marginal" similarities in the effects shown by the oral study relied on by MDH and the results of the inhalation study relied on by EPA. *See* WG Att. 9 at 6-7.
- c. The RTR extrapolation was performed in-house by MDH, and no record of peer review by MDH staff or outside reviewers has been provided. The absence of external peer review does not provide confidence in the assumptions used by MDH in performing the RTR.
- d. In addition to these specific problems with MDH's RAA, Water Gremlin will offer testimony on the significance that EPA did not do an RTR

¹⁰ Minnesota Department of Health, "Statement of Need and Reasonableness, proposed Permanent Rules Relating to Health Risk Values," at 10-11 (August 2001).

extrapolation for TDCE at any time during the period from 2010-2020, when there was no inhalation toxicity Reference Concentration available. The Shopp study relied on by MDH and other oral exposure studies were fully available during this period, and having an inhalation toxicity value would have been useful in a number of contexts. The fact that EPA did not do an RTR extrapolation is strongly indicative that EPA did not believe one could be reliably performed for TDCE based on the study data and toxicokinetic information available.

- e. For these reasons, Water Gremlin’s toxicologist will testify that the MDH RAA does not provide a reliable basis on which to derive a permit limit for TDCE. In addition, a contested case is necessary to assist the MPCA in determining what protocols were employed to ensure the reliability of the MDH RAA, in the event that the MPCA intends to rely on the MDH RAA for establishing the Water Gremlin TDCE permit limits.

1. There are Material Issues of Fact As to Whether the EPA TDCE PPRTV Provides a Superior Benchmark for Setting Water Gremlin Permit Limits to the MDH RAA.

19. Independently of the unreliability of the MDH RAA, a more technically defensible inhalation toxicity benchmark is available. In September 2020, EPA established Provisional Peer-Reviewed Toxicity Values (“PPRTV”) for TDCE through the inhalation route of exposure. The chronic inhalation PPRTV reference concentration for TDCE is 40 $\mu\text{g}/\text{m}^3$. MDH claims it considered and rejected the EPA PPRTV “when it was publicly released.” TSD Att. 9 at 5. MDH rejected the EPA PPRTV in favor of its updated RAA derived from Cal-EPA’s oral toxicity value using RTR.

20. MDH states four reasons for rejecting the EPA (2020) PPRTV:

- a. The EPA (2020) PPRTV is based on a DuPont 1998 inhalation study, which EPA determined in 2010 was insufficient to establish an RfC, because of “toxicologically questionable endpoints.” TSD Att. 9 at 5.
- b. The DuPont 1998 study was not peer reviewed. *Id.*
- c. “MDH considered the Shopp et al. 1985 drinking water study to be superior for tDCE as it reports on a specific challenge and response to the rodent immune system and not just a standard blood count panel as in Dupont 1998.” *Id.*, and
- d. the drinking water pathway represents a more continuous internal exposure to the rodent rather than a six-hour episodic exposure occurring five days per week where recovery over 18-hour periods and weekends is likely.” *Id.*

21. Water Gremlin’s toxicologist and other witnesses will testify that none of these are satisfactory reasons for rejecting the EPA PPRTV in favor of the MDH RAA. Specifically:

- a. The uncertainty regarding toxicological endpoints reported in the DuPont 1998 study was addressed in the 2020 EPA re-evaluation conducted to support derivation of an inhalation PPRTV. EPA resolved these issues by selecting the apparent dose-related critical effect from the DuPont study and applying updated BMDS software (in the same way that MDH applied updated BMDS software in re-evaluating the MDH RAA in 2020). In fact, EPA specifically concluded that the DuPont 1998 study met **all** the requirements for use in developing a provisional RfC, with the sole exception that the DuPont 1998 study was not peer-reviewed.

Consequently, the 2020 inhalation PPRTV was designated as a screening level p-RfC.

- b. Lack of peer review of the key study (DuPont 1998) relied upon by USEPA (2020) is not a valid reason for preferring the MDH RAA over the EPA PPRTV, because the MDH RAA is not itself peer-reviewed.
- c. Any minor incremental value provided by the specific immune system challenge conducted in the Shopp study is overwhelmed by the limitations and uncertainties associated with conversion of oral exposure to inhalation exposure. Throughout its memorandum, MDH compares and contrasts the underlying studies (Shopp 1985 oral and DuPont 1998 inhalation) without acknowledging that differences in study design and measures of effect do not detract from the DuPont study's direct relevance to deriving a RfC for inhalation of TDCE in ambient air and superior applicability to an inhalation exposure context.
- d. MDH is correct that a drinking water exposure is a more continuous exposure than inhalation, but this is simply another example of the problems with RTR extrapolation. Inhalation toxicity values (RfCs and Inhalation Unit Risk Concentrations) are derived using assumptions that a person is continuously exposed to that concentration in air. No adjustments are made for intermittent exposures. No off-site person will ever be continuously exposed, or even consistently exposed, to emissions from the Water Gremlin facility, if for no other reason, because of the variabilities of wind transport. This has been confirmed by years of actual

monitoring data for TDCE emissions from the Water Gremlin facility.

Regardless, the continuous exposure provided in the Shopp study is not an advantage of that study over the DuPont study, because inhalation results are adjusted to reflect an assumption of continuous exposure.

2. Even if route-to-route extrapolation were reliable, the MDH did not follow its own hierarchy of inhalation health benchmarks.

22. The TSD indicates that the MDH RAA of 20 $\mu\text{g}/\text{m}^3$ was used to determine the overall facility limit for TDCE based on a “hierarchy for toxicity value information sources” agreed upon by the MPCA and MDH. TSD at § 3.6.2.2. The TSD posits that because MDH toxicity values are first in the hierarchy, the MPCA applied the MDH RAA value. This hierarchy is included in MPCA guidance on Air Emissions Risk Analysis published online¹¹ and is as follows:

1. MDH Health-Based Values and Risk Assessment Advice for Air
2. MDH Health Risk Values
3. USEPA Integrated Risk Information System (“IRIS”)
4. California Environmental Protection Agency (“CalEPA”) Reference Exposure Levels and Cancer Potency Values
5. PPRTVs derived by USEPA's Superfund Health Risk Technical Support Center (STSC) for the USEPA Superfund program

23. While an MDH RAA is higher in the benchmark hierarchy than USEPA IRIS and PPRTV values, the MDH itself did not follow the guidance hierarchy in developing its site-specific RAA for the Water Gremlin facility. Initially, in 2019, the MDH determined a chronic RAA value

¹¹ Minnesota Department of Health, “Air Emissions Risk Analysis (AERA) Guidance,” at 29 (Feb. 2019), <https://www.pca.state.mn.us/sites/default/files/aa9-18.pdf>.

for TDCE of 70 µg/m³, based on an RTR extrapolation of the chronic oral reference dose provided by USEPA IRIS. However, in 2020, the MDH discarded the USEPA IRIS chronic oral reference dose in favor of a chronic oral reference dose developed by CalEPA,¹² which ranks *lower* in the hierarchy than USEPA IRIS. MDH justified this departure based on CalEPA’s criticisms of the USEPA RfD, but the mechanism for such review and adjustment is through the IRIS process, rather than selective reliance on lower-ranked benchmark sources. This is illustrative of the cherry-picking of data and methods exhibited by MDH throughout the Water Gremlin RAA process. In addition to the violation of MDH’s own guidance, there is a material issue of fact as to whether the USEPA IRIS RfD is a more scientifically reliable standard than the CalEPA RfD, and Water Gremlin’s toxicologist will testify why the USEPA IRIS RfD is factually best suited for the risk assessment.

3. MDH’S Qualitative Reasons for the RAA Standard are Not Scientifically Sound

24. MDH further justifies its RAA RTR extrapolation based on three qualitative factors:

- a. The community near Water Gremlin was exposed to TCE emitted from the Water Gremlin facility for years prior to Water Gremlin’s switch from TCE to TDCE, and the TDCE exposure may be cumulative of the TCE exposure because both are industrial chlorinated solvents, WG TSD Att. 9 at 5;
- b. Covid-19 may exacerbate the effects to TDCE exposure, *Id.* at 7; and
- c. Protection of public health is of the “utmost priority.” *Id.* at 5.

¹² See Minnesota Department of Health, “Air Toxicological Summary for: trans-1,2-dichloroethylene,” at 3 (May 2020), [https://www.health.state.mn.us/communities/environment/risk/docs/guidance/air/tcesumm.pdf](https://www.health.state.mn.us/communities/environment/risk/docs/guidance/air/tncesumm.pdf).

25. There are material disputes of fact as to whether any of these are scientifically valid reasons to select the MDH RAA over the USEPA PPRTV. Specifically, Water Gremlin's toxicologist will testify:

- a. MDH itself admits that there is no known interaction between TCE and TDCE exposure. ("The health effects of a chronic TCE exposure followed by tDCE exposure are unknown at this time." *Id.* at 7). Furthermore, there is also no reason to believe that any effects of TDCE are cumulative of those with prior TCE exposure. Both TCE and TDCE are quickly eliminated from the body and do not bioaccumulate. MDH does not provide evidence that exposure to the low levels of TDCE measured in ambient air at Water Gremlin's monitoring locations increases the inferred risk to the surrounding community. In fact, in their April 2022 Water Gremlin Public Health Assessment: Public Comment Draft, MDH concludes that "*past or current t-DCE...air emissions are not expected to harm people's health.*"
- b. MDH asserts that the RAA was released at a time when Minnesota was "besieged by Covid-19." *Id.* at 7. MDH is clearly justifying the RAA based on the uncertainty surrounding Covid-19 at that time, when vaccines and treatments for Covid-19 did not exist and there was great uncertainty about even the mechanisms of Covid-19 transmission. That uncertainty has since been much reduced through the developments of vaccines, treatments, and effective exposure controls. MDH also now admits that there is no known interaction between TDCE and Covid-19. *Id.* at 7. None

of the studies referenced by MDH support such an inference. Furthermore, the studies referenced by MDH were available as of April 2022 when the Water Gremlin Public Health Assessment: Public Comment Draft was released, but were not cited in that document. It is therefore rank speculation for MDH to conclude that there would be any interaction between TDCE emissions in compliance with the EPA PPRTV and any incidence of Covid-19, and Water Gremlin's toxicologist will testify to that effect. MDH's invocation of its general interest in public health is not a scientifically valid reason to choose the MDH RAA over the EPA PPRTV. Public health is relevant to all chemical exposures and the development of all RfC's, RfD's, and PPRTVs. MDH fails to acknowledge all the many uncertainty and protective adjustments that are incorporated as a matter of course in the development of any of these values. EPA follows a rigorous process to develop toxicity values. Once the key study and critical effect have been identified, a Point of Departure (POD) is determined for derivation of the RfD or RfC (for non-cancer health effects). Depending on the study design, particularly the number of dose levels evaluated, the POD is determined for a response that is different in exposed humans or animals compared to unexposed (control) subjects. In the case of TDCE, there were enough dose levels in the drinking water study by Shopp et al. 1985 and the inhalation study by DuPont 1998 for EPA to use Benchmark Dose Modeling Software (BMDS) to determine the POD. The POD dose is then adjusted downward

by the application of uncertainty factors to account for limitations in the database such as: inferring the effects of chronic exposure from a subchronic study; extrapolating from an animal study to humans; variability and sensitivity of the human population; and number and quality of available studies. For TDCE, the chronic oral RfD and chronic screening level p-RfC are **3,000 times LOWER** than the lowest exposure levels that produced a response in the experimental animals.¹³ The low RfD and RfC values are a function of the limited database and should not be interpreted to infer the toxicity of TDCE. Because the public health is already a priority and was considered throughout the development of the EPA PPRTV, that priority does not provide an additional and independent qualitative reason to select the MDH RAA.

26. Water Gremlin raised all the foregoing defects with MDH RAA in Comments and a prior Contested Case Petition on the Originally-Noticed Permit. The sum total of the MPCA's response in the TSD to the Draft Permit is the following: "MDH reviewed Water Gremlin's permit comments, including the supplement to Water Gremlin's technical memorandum, and determined this information did not change its conclusion that the alternatives proposed by Water Gremlin has significant limitations. The MPCA agrees with MDH's assessment and is therefore applying the chronic RAA of 20 µg/m³ and the sub-chronic RAA of 200 µg/m³ to establish the t-DCE emission limit in support of the Water Gremlin draft Permit No. 12300341-101." TSD at 1063. These are bald conclusions, not reasons, and are unresponsive to Water

¹³ See EPA PPRTV for TDCE at 43, Table A-2.

Gremlin's comments. Therefore, Water Gremlin re-alleges the same objections and request for a contested case.

B. The MDH Improperly Applied a Chronic Inhalation Health Benchmark

27. The Draft Permit contains an enforceable limit of 32.6 tons per year of TDCE emissions, based on the MDH chronic inhalation RAA health benchmark of 20 $\mu\text{g}/\text{m}^3$. According to the TSD accompanying the Originally-Noticed Permit ("Original TSD"), the MPCA utilized the chronic health benchmark "in consideration to [sic] the extended prior unpermitted exposures of this community." Original TSD at 41. The Draft Permit and the supporting documents do not, however, allege (1) any prior unpermitted emissions of TDCE, or (2) any connection between historic TCE emissions and future TDCE emissions. In fact, the MDH admits that there is no known cumulative interaction between TDCE and prior TCE exposure. WG TSD Att. 9 at 7. Consequently, MPCA did not articulate a valid reason to apply a chronic standard over a subchronic standard in the Originally-Noticed Permit or Original TSD.¹⁴

28. In the updated TSD to the Draft Permit, the MPCA now offers a post-hoc argument based on the commencement of TDCE use in January 2019, which would mean that there will be eight cumulative years of emissions by the end of the Permit term in 2028. This new rationale is not supported by any allegation that any individual may in fact have sustained chronic exposure to TDCE. The new justification also ignores the existence of extensive ambient monitoring data that shows that no individual will be exposed to continuous TDCE emissions during any relevant period, even using the monitors with the highest emissions detections.¹⁵

¹⁴ We note that Water Gremlin proposed a TDCE limit over the life of the permit that is well below any chronic or sub-chronic risk derivation, and this was rejected by the MPCA.

¹⁵ Monitor 4 – the ambient monitor with the highest average readings over the multi-year monitoring period – reads as "non-detect" over half the time. Thus it will be several years after the permit term before any individual could conceivably have eight years of total exposure (much less continuous exposure). Consequently, the MPCA's

Consequently, even under the MPCA's new argument, there is no scientific basis to conclude that any individual will receive eight years of continuous exposure, as required for a chronic exposure assumption and standard. MPCA further argues that the permit term may be extended after the initial 5-year term, but this does not limit the MPCA's legal authority to adjust Permit terms at renewal to ensure safe exposure at both sub-chronic and chronic levels as necessary.

C. The MPCA Improperly Abandoned the Agency's Own Risk Assessment Screening Protocol

29. In addition to evaluating individual emissions, the MPCA routinely calculates a facility-wide hazard index through the RASS, in which it assigns values to the hazards associated with each pollutant emitted to derive a total numeric value for the facility. This becomes the "Facility-wide Endpoint Hazard Index for the Facility," and can result in adjustments to emissions limits over-and-above those that would be allowed on a pollutant-by-pollutant basis. Minn. Rules 4717.8600 describe the procedure for calculating a facility's hazard index. Subpart 2(D) states: "A hazard index of one or less indicates a combined concentration of chemicals unlikely to cause an adverse health effect to the general public." Because this is an inherently crude and overprotective exercise, the MPCA's normal process is to calculate to one significant digit. In practice, values between 1.01 and 1.49 round to 1, values between 1.51 and 1.99 round up to 2. Water Gremlin's facility-wide endpoint hazard index, even using MDH's RAA, would round to 1, and at that level Water Gremlin's emissions limits would require no further

fallback argument that an individual could be chronically exposed to TDCE within the permit term is factually incorrect.

adjustment. Water Gremlin's facility-wide emissions limit for TDCE would have been 51.2 tons per year.¹⁶

30. MPCA departed from this practice in the case of Water Gremlin for the Originally-Noticed Permit. MPCA refused to allow any rounding for a facility-wide Hazard Index, and furthermore applied a TDCE-specific endpoint hazard index of 1.0 (no rounding). TSD at § 3.6.2.2. As a result, Water Gremlin's TDCE emissions limit was preliminarily lowered to 38.7 tons/year.

31. MPCA's justification in the Originally-Noticed Permit for this change in the RASS protocol was the extent of Water Gremlin's historic emissions. This was not scientifically or factually justifiable, for the following reasons:

- a. The facility-wide hazard index process is intended to address a facility's *prospective* emissions over a range of pollutants; there is no process, standards, or guidance for further adjusting the index on the basis of historic emissions. Should MPCA wish to add a historic-emissions adjustment to the index development process, it should develop a new rule or guidance to govern the RASS process. MPCA simply made up and applied such an adjustment to Water Gremlin by fiat.
- b. The principal historic emissions of concern are for TCE, a chemical no longer in use at Water Gremlin. As previously explained, there is no scientific basis for adjusting the limits for TDCE emissions based on historic TCE emissions.

¹⁶ This petition disputes the MPCA's factual underpinnings and basis for the limitations set forth in the Draft Permit. Under the MPCAs normal protocols using consistent applications of facts, science and law, Water Gremlin's permit limit would be no less than 51.2 tons per year. Notwithstanding, Water Gremlin has offered to voluntarily limit its TDCE usage (using the MDH RASS recommendation) and has agreed to a graduated reduction of TDCE emissions to less than 20 tpy during the life of the 5 year permit. Indeed, Water Gremlin's proposed usage of TDCE over the 5-year life of the permit is well below that allowed in the Draft Permit. See further discussion in text.

- c. To the extent the MPCA relies on the historic emissions of other pollutants besides TCE for the departure from protocol, there is even less scientific basis for such an adjustment. The MPCA has not explained the toxicokinetic basis for an adjustment based on the historic emissions of any other pollutant by Water Gremlin, and Water Gremlin's toxicologist will testify that there is none.

32. In the updated TSD, the MPCA abandons the RASS protocol altogether. In Section 3.6.2.3, the MPCA states that the RASS protocol does not produce results that match ambient monitoring, and therefore it now declines to use the RASS at all. This is an even greater departure from Agency practice than in the Originally-Noticed Permit. In the Originally-Noticed Permit, the MPCA attempted (albeit in a flawed manner) to reconcile the differing results produced between ambient monitoring and modeling. In the Draft Permit, the MPCA simply discards modeling in favor of ambient monitoring. This is scientifically invalid for a number of reasons, including;

- a. The monitors are located on the property, and therefore would be *expected* to produce higher results than modeling, which is intended to estimate off-property receptor exposure; the observed differences tend to *validate* rather than undercut the modeling results;
- b. The modeling is more comprehensive, covering every hour of every day for five years at all locations, in contrast to the more limited sampling times and locations taken with ambient monitoring;
- c. Finally, modeling and ambient monitoring measure different things. Modeling is focused on the emissions of the Facility, while monitoring

measures all sources impacting the monitor. The MPCA contends that there are no other known sources of TDCE in the area, but it has made no known investigation of other possible sources. This was a flawed assumption when the MPCA was attempting to reconcile the differing results of monitoring and modeling – it is even more so now that the MPCA has at the eleventh hour rejected modeling altogether.

D. The MPCA Improperly Added a 16 Percent Safety Factor to the Facility TDCE Limit

33. In the Originally-Noticed Permit, after adjusting the RASS to reflect its rounding and TDCE-specific endpoint hazard index decisions imposed on Water Gremlin, MPCA made a further reduction to its proposed limit, in an apparent attempt to calibrate the limit derived from its risk modeling procedure above (38.7 tons per year) further downward by using the ambient monitoring data that had been generated over the prior two-plus years. TSD at § 3.6.2.2. This was transparent reverse engineering to achieve a pre-determined result. That is, the ambient monitoring data showed only a brief period whereby the 365-day rolling mean concentration between approximately November 9, 2021 and January 8, 2022 (based on one monitor) was in excess of MDH's RAA of 20 $\mu\text{g}/\text{m}^3$. MPCA paired the 365-day rolling VOC tracking required by the Administrative Order with this data and determined that the 365-day rolling emissions total, when the ambient monitors demonstrated a 365-day mean concentration above 20 $\mu\text{g}/\text{m}^3$ (November 9, 2021), was approximately 32.6 tons per year VOCs (as of November 6, 2021). MPCA used this pairing to arrive at its adjusted TDCE limit of 32.6 tons per year, citing the approximate 16% reduction (i.e., from 38.7 tons per year to 32.6 tons per year) as “appropriate based on the weight of the evidence provided by actual ambient air measured concentrations of t-

DCE around the facility and the associated t-DCE usage at the facility.” TSD at § 3.6.2.3. Water Gremlin had several objections to this adjustment:

- a. The method used by MPCA is completely arbitrary and amounts to an indefensible leap. There is no linear relationship or direct connection between TDCE usage (tons per year) and ambient concentration (micrograms per cubic meter). While partially dependent on emission levels, the concentrations observed at any one ambient monitor location or point in time are also a function of wind speed and direction for the time-period of interest. The inability to scale stack emissions directly to ambient concentrations is why risk modeling is normally conducted using an EPA-approved dispersion model coupled with five years of NWS hourly weather observations. The variability in weather patterns possible for a given area are deemed to be sufficiently represented by five years of representative hourly weather data. Using such data under MPCA’s typical risk modeling procedures, the maximum calendar year average result for any one receptor in the grid (among hundreds or thousands) is then used as a surrogate for maximum exposure and limits are set on this basis.
- b. MPCA’s adjustment method is further cast into question due to other occasions whereby 365-day VOC usage levels in excess of 32.6 tons per year resulted in 365-day rolling concentrations well below 20 $\mu\text{g}/\text{m}^3$ (e.g., Summer 2021, Summer 2022). Using MPCA’s pairing method, one could infer that higher usage levels could be supported at different times of the year. This is not being proposed by Water Gremlin; instead, it simply

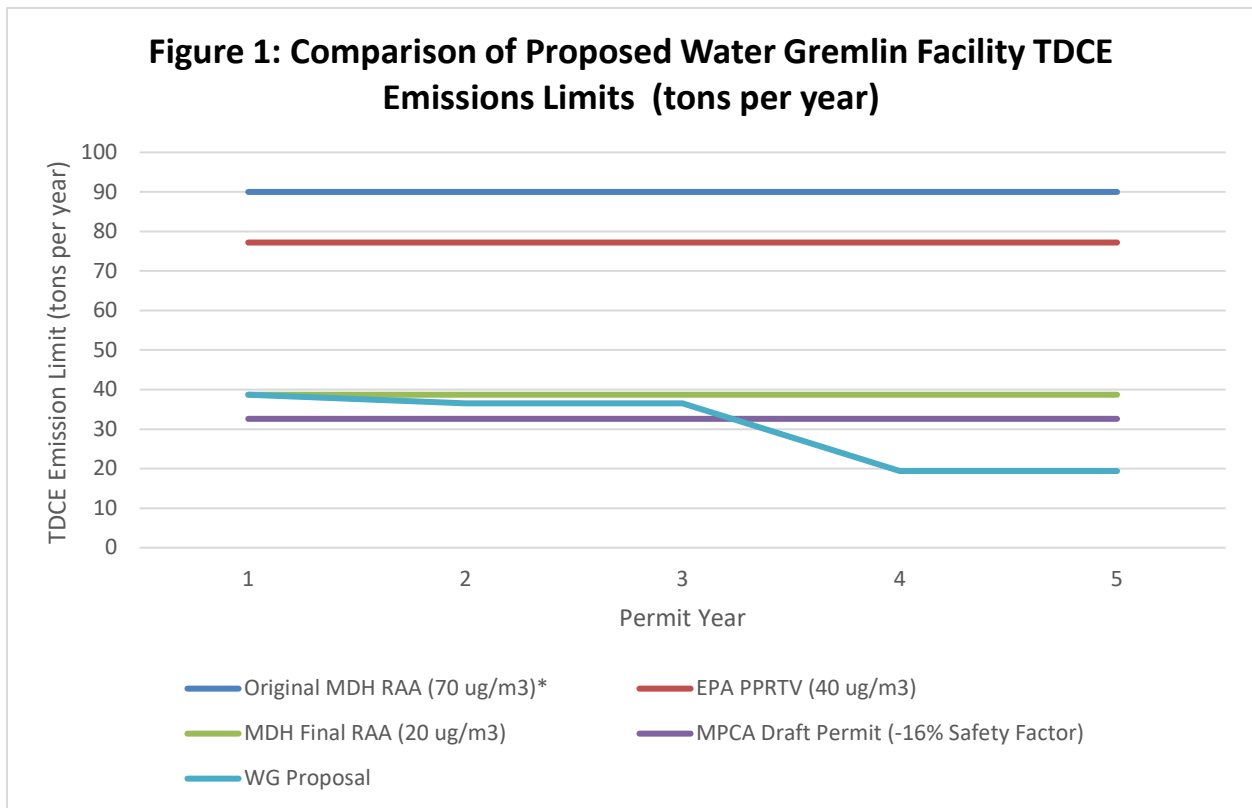
shows that MPCA's arbitrary selection of one monitoring event in November 2021 to set an annual limit is not mathematically defensible.

- c. MPCA states that it "must be noted that there are no other known sources of t-DCE around the Water Gremlin facility other than Water Gremlin itself." While none are known of, this does not negate the possibility of such sources existing in the area. For example, reviewing MPCA's 'What's In My Neighborhood' tool, various hazardous waste licensees are located in the region. It is certainly plausible that such businesses (such as auto dealers, cleaners or others solvent users) ceased usage of TCE under Minnesota's ban and found TDCE as an acceptable alternative based on prior guidance by MNTAP to businesses, in exactly the same manner as occurred with Water Gremlin. The MPCA's presumption that there are no other sources is therefore unsound.
- d. In the updated TSD, the MPCA continues to defend the 16% safety factor, asserting that the presence of other TDCE emitters in the area would tighten, not loosen, limits imposed on Water Gremlin. This new rationale is problematic in that it simply assumes that any other emitters can freely emit without regulations on themselves. Second, it confuses the issues. Whether or not other emitters would get a free pass and Water Gremlin's permit would bear all the emission limits, it would provide another explanation why monitoring and modeling produce different results, and invalidate the MPCA's factual and scientific basis for entirely rejecting

modeling in favor of monitoring. The references to the 16% safety factor in the updated TSD remain as arbitrary as in the original TSD.

E. There are Material Disputes of Fact as to Whether Water Gremlin’s Proposed Alternative TDCE Emissions Schedule is More Protective of Public Health Than the Emissions Limits in the Draft Permit.

34. As explained, there is no scientific justification for imposing a TDCE permit limit below the EPA PPRTV chronic inhalation standard of 40 µg/m³, which translates to an annual tonnage limit of 77.2, or 38.6 tons over the five-year duration of the permit. Nevertheless, Water Gremlin proposed to the MPCA that it would be prepared to accept a reduced emissions schedule as a binding term of the permit. Figure 1, below, provides a comparison of how the TDCE limit has been viewed, and how Water Gremlin’s proposal is justified based on the science and facts, and results in reduced emissions over the life of the permit.



* The original RAA of 70 µg/m³ could have afforded TDCE usage up to proposed Total VOC minor source permit limit of 90 tons/year.

35. Figure 1 compares the total amount of TDCE allowed under the Draft Permit (163 tons based on 32.6 tpy for 5 years) versus Water Gremlin's proposal (*see* Paragraph 11 *supra*) that would actually reduce total emissions by over 12 tons over the life of the permit beyond what even the MPCA contends can be lawfully emitted. Thus, the Water Gremlin proposal would actually reduce allowable TDCE emissions by almost 50% by the end of the permit term (38.7 tpy down to 19.4 tpy), but this was rejected without any factual analysis or consideration of risk reduction by the agency. There is no legal prohibition on providing for a graduated emissions schedule in a permit in lieu of the straight-line set of limits. MPCA nevertheless rejected Water Gremlin's proposed alternative emissions schedule. MPCA's sole rationale for rejecting the schedule was the contention that emissions can never be allowed to exceed the 32.6 ton annual limit derived from the MDH RAA. As explained in this petition, there is no scientific justification for this position and a contested proceeding is critical to help evaluate the facts for a fair and fully informed permit decision.

36. In addition, to the extent that the MPCA credits any of the MDH's stated qualitative reasons for the applying the MDH RAA (historic emissions of TCE, theorized interaction with Covid-19, and an over-riding priority to protect public health), then Water Gremlin's proposed emissions schedule is superior to that proposed in the Draft Permit. Water Gremlin's schedule would result in reduced net emissions, and would be more protective of the public health than the TDCE emissions limit in the Draft Permit. These benefits compound to the extent the permit extends beyond the initial 5-year term, as Water Gremlin would be emitting over 11 tons per year less of TDCE than under the Draft Permit conditions. Consequently, there is a disputed issue of material fact as to whether Water Gremlin's proposed alternative schedule

is equally or more protective of public health than the limits in the Draft Permit, under the MPCA's own permitting assumptions.

37. These objections were stated in Water Gremlins' Comments and Contested Petition on the Originally-Noticed Permit. The MPCA has not contested any of them in the updated TSD, but nevertheless has rejected the proposal. As a factual matter, the MPCA claims that it is important to finalize and issue the Draft Permit in the near future, for the protection of public. This too is untrue. Despite the onerous (both as to time and millions of dollars in expense) requirements, Water Gremlin has been operating in compliance with the Stipulation Agreement and unilateral Administrative Order imposed by the MPCA. Even if adoption of Water Gremlin's proposed alternative emissions schedule would delay Permit issuance, which Water Gremlin disputes, there is no scientific basis to conclude that public health will be negatively affected if Permit issuance is delayed to incorporate Water Gremlin's proposed alternative emissions schedule. This especially true where the proposed schedule would reduce net emissions over the life of the Permit.

F. There is No Scientific Justification for In-Stack Monitoring and the Provisions for Discontinuing Ambient Monitoring are Unworkable

38. The Draft Permit imposes three levels of emissions monitoring for TDCE: (1) inventory tracking and management of TDCE, (2) in-stack monitoring, and (3) ambient monitoring. The in-stack monitoring serves no legitimate purpose, and indeed confuses tracking of TDCE emissions because it measures Total Hydrocarbons and attributes any molecules containing carbon toward a concentration as TDCE emitted. Inventory tracking and management results in clear monitoring and record-keeping of actual TDCE use and emissions. Ambient monitoring is specific to TDCE, and demonstrates levels detected at the property line. Although ambient monitoring may be over-predictive of actual emissions from Water Gremlin because of

potential off-site sources of TDCE, it provides an environmental “check” for actual emissions of TDCE, not Total Hydrocarbons.

39. In contrast, in-stack monitoring provides no additional information, and because the in-stack monitor only detects hydrocarbons, rather than TDCE, it frequently overstates TDCE emissions. More importantly, over three years of in-stack monitoring data have been collected. Water Gremlin first started operating its Total Hydrocarbon (THC) monitor on May 1, 2019 with evaluations required for each day in which coating operations were conducted. Under the terms of the January 17, 2020 Administrative Order, Water Gremlin was required to continue operation of this THC monitor. This monitoring data has never revealed any systemic issues with Water Gremlin’s daily VOC/solvent usage tracking. With that extended dataset, and the inherent inaccuracy of the in-stack monitoring, in-stack monitoring confuses rather than illuminates emissions. Rather than discontinue in-stack monitoring started under the Administrative Order and instead rely on modeling as is typically done with permits, the MPCA instead proposes to increase the requirements by establishing daily reporting and auditing procedures. Recognizing the inaccuracy of the data, the MPCA attempts to correct for that by establishing “compliance bands” purporting to restrict the circumstances under which further auditing is necessary. But this attempted fix does not address the demonstrated fact that in-stack monitoring is less accurate than the dataset it is designed to check.

40. In the updated TSD, the MPCA attempts to justify in-stack monitoring on the grounds that Water Gremlin will be operating within a “very tight compliance” margin, and it is necessary to have “real time” data to check ambient monitoring and inventory tracking to ensure protection of public health. In addition to the fact that in-stack monitoring is less accurate than other monitoring and tracking, and therefore is useless to validate those other methods, this new

justification is scientifically invalid, and is completely contrary to emission limits based on chronic exposure. Where emissions are regulated on a chronic basis, daily emissions below sub-chronic levels are irrelevant, as long as long term emissions averages comply with the chronic limit. Water Gremlin's experts will testify that there is no scientific basis for requiring in-stack monitoring in this context.

41. In addition, Water Gremlin disputes whether the in-stack monitoring provides any useful information for maintaining compliance with the permit. Stantec witnesses will testify that the requirement provides no value, and a contested case is necessary resolve this issue.

42. The draft permit contains provisions for discontinuation of ambient VOC monitoring at Permit Item 5.1.57. The discontinuation provisions are unworkable as a practical matter, for the following reasons:

- a. The facility must continue ambient monitoring for at least 24 additional months once the permit is issued, but shutdowns of coating operations do not count toward this 24-month requirement, thus Water Gremlin is discouraged from stopping coating on any day other than weekends and holidays "when operation would normally stop," because doing so would extend the 24-month period before monitoring could be discontinued. Water Gremlin inquired with MPCA staff about receiving credit for having collected identical data for over two years already and was wrongfully denied.¹⁷ This is not equitable and there is no factual basis for MPCA's arbitrary decision.

¹⁷ Water Gremlin has spent millions of dollars on MPCA required monitoring, all of which the MPCA now discards in favor of years of additional monitoring based not on any factual records, but merely on the punitive decision-making that was established by the agency prior to any analysis of the records or Water Gremlin's operations. This is an agency action in support of a prior conceived conclusion rather than based on the factual record.

- b. Water Gremlin must be in compliance with both the 20 $\mu\text{g}/\text{m}^3$ RAA and the 32.6 tpy TDCE limit on a 365-day rolling sum basis, both of which Water Gremlin objects to as described above.
- c. The statistical analysis required in order to discontinue ambient monitoring essentially adds an additional three layers of conservatism to the monitoring data without any basis or prior precedent: (1) (2) and (3)
 - 1. It arbitrarily lowers the MDH RAA from 20 $\mu\text{g}/\text{m}^3$ to 16 $\mu\text{g}/\text{m}^3$;
 - 2. It applies a 95% upper confidence limit on the mean instead of using the calculated mean, which will always push the ambient concentration result higher; and
 - 3. It applies the *chronic* MDH RAA value of 20 $\mu\text{g}/\text{m}^3$, which is intended to apply to an exposure of a tenth of a lifetime (8 years) or more, to a single year. Water Gremlin must be operating with TDCE emissions at least 80 percent of the permitted limit.
- d. Together, these requirements make it extremely difficult for Water Gremlin to discontinue the unnecessary and costly ambient monitoring that does not provide any additional protection to the surrounding community.

V. RELIEF REQUESTED

43. For the foregoing reasons, Water Gremlin requests a contested case to ensure that the record is fully developed and to resolve the numerous material disputes of fact between the MPCA, MDH, and Water Gremlin.

Dated: March 3, 2023

DORSEY & WHITNEY LLP

By: /s/ Mark R. Kaster

Mark R. Kaster (Bar #0157519)

Michael R. Drysdale (Bar #0257606)

50 South Sixth Street, Suite 1500

Minneapolis, MN 55402-1498

Telephone: (612) 340-2600

kaster.mark@dorsey.com

drysdale.michael@dorsey.com

*Attorneys for Petitioner Water Gremlin
Company*

Exhibit 2

The **Repeat** column indicates whether Water Gremlin reiterates this comment with respect to the January 2023 Draft Permit

Highlighted denotes modified text from July 2022 draft, which is **bolded** for deletions/additions

Page	Reference to Permit Section	July 2022 Draft Permit Text Provided by MPCA	July 2022 Water Gremlin Comment	January 2023 Preliminary Draft Permit Text	Resolved?	Repeat?
	Cover Letter	<p>This permit amendment supersedes Air Emission Permit No. 12300341-004 and authorizes the Permittee to modify and operate the stationary source at the address listed above unless otherwise noted in the permit. The Permittee must comply with all the conditions of the permit, Air Emission Permit No. 12300341-101. At the time of permit issuance, the following agreements and orders are enforceable until the Minnesota Pollution Control Agency terminates these:</p> <ul style="list-style-type: none"> • March 1, 2019, Stipulation Agreement; and • January 17, 2020, Administrative Order. <p>The permit acknowledges that at the time of permit issuance, there are other enforceable documents regulating air emissions from the facility and that these enforceable documents are not terminated with the issuance of Permit No. 12300341-101. The other enforceable documents are the</p>	<p>All of the regulated party requirements set forth in the Stipulations agreement and AO have been completed, per the negotiated agreement with the State (AG's office) and Water Gremlin. As discussed with MPCA, the permit includes the terms and conditions agreed to by the parties and there is no basis for reference to the AO and Stipulation Agreement, which must be terminated.</p>	<p>Same language as July 2022 Draft Permit.</p>	No	Yes
5	Description of Permit Additions	<p>Stipulation Agreement (Agreement) executed March 1, 2019, and Administrative Order (Order), signed January 17, 2020.</p>	<p>Terminate the Agreement and Order and delete this paragraph. The air permit contains the pertinent requirements.</p>	<p>Same language as July 2022 Draft Permit.</p>	No	Yes
5	Description of Permit Additions	<p>Addition of continuous emissions monitoring system (CEMS) in the battery terminal post coater stack. The permit includes a VOC CEMS in the battery terminal post coater stack (STRU 73). This was required temporarily by the Agreement to monitor the occurrence of emissions from the coaters and quantify the amount of t-DCE (as VOC) leaving the coaters to verify compliance with solvent use limits required by the Agreement. Permanent operation and maintenance of a VOC CEMS, record keeping of CEM results and CEM correlation validation is required by the permit as a supplement to the main compliance determination method of record keeping of daily material usage. Other supplemental requirements include quarterly VOC solvent inventory audits, and reporting.</p>	<p>Delete the CEMS requirement. CEMS for STRU73 is not necessary nor useful. See comment letter for further information.</p>	<p>Addition of continuous emissions monitoring system (CEMS) in the battery terminal post coater stack. The permit includes a VOC CEMS in the battery terminal post coater stack (STRU 73). This was required temporarily by the Agreement Administrative Order to monitor the occurrence of emissions from the coaters and quantify estimate the amount of t-DCE (as VOC) leaving the coaters to verify compliance with solvent use limits required by the Stipulation Agreement. Permanent operation and maintenance of a VOC CEMS, recordkeeping of CEM results, and CEM correlation validation is required by the permit as a supplement an audit to the main compliance determination method of daily material usage recordkeeping. Other supplemental audit requirements include quarterly VOC solvent purchase and inventory audits, and reporting.</p>	No	Yes
6	Description of Permit Additions	<p>Addition of solvent vapor remediation system. The permit includes the addition of the sub-slab depressurization and solvent vapor extraction system with associated GAC canister control equipment to capture existing (and future) sub-slab solvent vapor contamination identified during the remedial investigation. The permit includes limits on emissions of target chlorinated compounds, operation, monitoring, recordkeeping, and reporting requirements.</p>	<p>Testing and modeling shows the GAC is unnecessary and does not belong in the air permit. The Remediation group oversees the mitigation system operation.</p>	<p>Addition of solvent vapor remediation system. The permit includes the addition of the sub-slab depressurization and solvent vapor extraction system with associated GAC canister control equipment to capture existing (and future) sub-slab solvent vapor contamination identified during the remedial investigation. The permit includes limits on emissions of target chlorinated compounds, operation, monitoring, recordkeeping, and reporting requirements.</p>	No	Yes
6	Description of Permit Additions	<p>Addition of ambient monitors for VOCs with speciation for t-DCE and other VOCs. Operation of approved ambient air VOC monitors required by the Agreement are to be operated for at least two years following permit issuance to ensure t-DCE emissions remain below health risk benchmarks at all times. Conditions that must be met to discontinue VOC monitoring are also specified. The facility is responsible for managing each monitor's operation, maintenance, recordkeeping, and reporting of results as described later in this permit.</p>	<p>There is no scientific justification for ongoing ambient air monitoring. Water Gremlin has collected (and provided on a simultaneous basis) three years of ambient air data at a cost of more than \$1.5MM per year (as required under the Unilateral Administrative Order). Water Gremlin has also provided the MPCA with a compliant model. There is no factual, scientific basis or legal requirement for ambient air monitoring based on the toxicity evaluation, the model and the collection of over two years of data.</p>	<p>Addition of ambient monitors for VOCs with speciation for t-DCE and other VOCs. Operation of approved VOC ambient air VOC monitors required by the Agreement are to be operated for at least two years following permit issuance to ensure t-DCE emissions remain below health risk benchmarks at all times Minnesota Department of Health's (MDH) risk assessment advice (RAA). Conditions that must be met to discontinue VOC monitoring are also specified. The facility is responsible for managing each monitor's operation, maintenance, recordkeeping, and reporting of results as described later in this permit.</p>	No	Yes
6	Description of Permit Additions	<p>The permit also requires daily inspection of enclosure integrity, annual testing of the enclosure to ensure it meets the definition described above following EPA Method 204 in Appendix M of 40 CFR Part 51, and maintenance of coating room floor sealant to avoid further sub-slab contamination due to vapor intrusion or spills.</p>	<p>The facility is not subject to 40 CFR 63 subp. Mmmm and should not be required to meet the standards of that NESHAP. Annual testing of the total enclosure should be replaced with testing every 5 years.</p>	<p>Same language as July 2022 Draft Permit.</p>	No	Yes

7	Description of Permit Modifications	<p>Modification of VOC emissions calculation procedure and addition of t-DCE emissions calculation procedure. The current permit authorizes calculation of VOC emissions using solvent purchase and inventory records. Due to concerns around the recordkeeping and compliance verification frequency of the current method, and to increase the accuracy of emissions accounting, the permit requires daily recordkeeping of several parameters related to solvent use, including VOC coating, water-based coating, and UV coating usage, VOC solvent recovered from the distiller, VOC waste, and calculating the VOC 12-month rolling sum and t-DCE 365-day rolling sum, in addition to VOC solvent purchase and inventory records. Uncaptured VOC/ t-DCE emissions outside the coating rooms will be included in daily calculations based on measured indoor air concentrations as described later in this permit.</p>	<p>Water Gremlin is unfamiliar with the concerns cited and the party who raised them. The uncaptured VOC/t-DCE emissions outside the coating room are insignificant, especially in light of the applicable EPA PPRTV threshold. Remove this requirement throughout the permit.</p>	<p>Modification of VOC emissions calculation procedure and addition of t-DCE emissions calculation procedure. The current permit authorizes calculation of VOC emissions using solvent purchase and inventory records. Due to concerns around the recordkeeping and compliance verification frequency of the current method, and to increase the accuracy of emissions accounting, the permit requires daily recordkeeping of several parameters related to solvent use, including VOC coating, water-based coating, and UV coating usage, VOC solvent recovered from the distiller, VOC waste, and calculating the VOC 12-month rolling sum and t-DCE 365-day rolling sum, in addition to VOC solvent purchase and inventory records. Uncaptured VOC/t-DCE emissions outside from the coating-rooms chemical storage room will be included in daily calculations based on measured indoor air concentrations as described later in this permit.</p>	No	No
7	Description of Permit Deletions	<p>After numerous attempts to obtain a consistent control efficiency greater than or equal to 70 percent as proposed in the application, the facility abandoned the adsorption unit as a feasible control device in its operations; therefore, the carbon adsorption unit has been removed from the permit. The facility will demonstrate compliance with VOC and t-DCE emission limits on coating operation through limiting solvent usage in coating operations.</p>	<p>As acknowledged here, usage limits and tracking are sufficient to demonstrate compliance. Modeling at the usage limits verifies ambient air concentrations are below health benchmarks. Monitoring is not necessary.</p>	<p>Same language as July 2022 Draft Permit.</p>	No	Yes
8	Summary of subject items	<p>COMG 5</p>	<p>Update COMG 5: Remove EQUI 85, 89, 92, and 97 as they are Tacolyn-only dip/drip coaters with no PM emissions and no need to be in a total enclosure.</p>	<p>Same language as July 2022 Draft Permit.</p>	No	No
25	5.1.37	<p>Equivalent or Better Dispersion (EBD) Modeling Triggers (Modeling Required): Any changes that affect any modeled PM10, PM2.5, NO2, and lead parameter or emission rate listed in Appendix C, or an addition to the information documented in Appendix C, trigger the EBD Remodeling Submittal requirement. This includes changes that do not require a permit amendment as well as changes that require any type of permit amendment. The updated EBD modeling results must demonstrate compliance with NAAQS for the modeled pollutant. The schedule for EBD Remodeling submittal is defined elsewhere in this permit. Changes made under the Administrative amendment process are excluded from this requirement. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>	<p>Unnecessary and burdensome requirement not required by rules. Delete the EBD Modeling Triggers. If a change does not require a permit amendment, any remodeling can wait until the next permit or amendment application.</p>	<p>Same language as July 2022 Draft Permit.</p>	No	Yes
25	5.1.38	<p>Updated AERA Triggers (AERA Required): Any changes that affect 1,2-(trans-) Dichloroethylene, lead, and other air toxics parameter or emission rate listed in Appendix C, or an addition to the information documented in Appendix C, or the health benchmarks for any of the evaluated chemical of concern have changed to more strict values, or there are new health benchmark values for chemicals of concern used at the facility, trigger the Updated AERA Submittal requirement. This includes changes that do not require a permit amendment as well as changes that require any type of permit amendment. The updated AERA results must demonstrate compliance with the health benchmarks for the modeled pollutants. The schedule for the revised AERA submittal is defined elsewhere in this permit. Changes made under the Administrative amendment process are excluded from this requirement. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>	<p>Unnecessary and burdensome requirement not required by rules. Delete the AERA Triggers. If a change does not require a permit amendment, any remodeling and risk re-evaluation can wait until the next permit or amendment application. To the extent that any risk analysis triggers are retained, it should only involve an updated RASS, as Water Gremlin has only prepared a RASS for this permit, not an AERA.</p>	<p>Updated AERA Triggers (AERA Required): The following changes trigger the Updated AERA Submittal requirement. This includes changes that do not require a permit amendment as well as changes that require any type of permit amendment:</p> <p>1. Any changes that replace t-DCE containing material with other VOC containing coating formulations and solvents other than the UV coating and water-based coating operations authorized by this permit. This type of change requires a major amendment to this permit.</p> <p>2. Any changes that affect 1,2-(trans-) Dichloroethylene, lead and any other air toxics parameter or emission rate listed in Appendix C, or an addition except for 1,2-(trans-) Dichloroethylene, additions to the information documented in Appendix C, or changes to the health-based guidance values benchmarks for any of the evaluated chemical of concern that have changed to stricter values, or there are new health-based air guidance benchmark values for chemicals of concern used at the facility, trigger the Updated AERA Submittal requirement. This includes changes that do not require a permit amendment as well as changes that require any type of permit amendment.</p> <p>The updated AERA results must demonstrate compliance with the health-based air guidance values benchmarks for the modeled pollutants. The schedule for the revised AERA submittal is defined elsewhere in this permit. Changes made under the administrative amendment process are excluded from this requirement. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>	No	Yes

		EBD Modeling Submittal at Reissuance: The Permittee shall submit an EBD Modeling Submittal with the permit reissuance application (due as stated elsewhere in this permit) that addresses any changes made during the permit term that did not require a permit amendment but that affected any modeled PM10, PM2.5, NO2, and lead parameter or emission rate documented in Appendix C, or an addition to the information documented in Appendix C and that did not trigger the EBD Modeling Triggers (Modeling Required) requirement. [Minn. R. 7007.0800, A) & (B, Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]	Delete the EBD Modeling Triggers. If a change does not require a permit amendment, any remodeling can wait until the next permit or amendment application.			
25	5.1.39		The cited rule does not contain a specific requirement with respect to this EBD submittal.	Same language as July 2022 Draft Permit.	No	Yes
26	5.1.40	Updated AERA Submittal at Reissuance: The Permittee shall submit an Updated AERA Submittal with the permit reissuance application (due as stated elsewhere in this permit) that addresses any changes made during the permit term that did not require a permit amendment but that affected any 1,2- (trans-) Dichloroethylene, lead, and other air toxics parameter or emission rate documented in Appendix C, or an addition to the information documented in Appendix C and that did not trigger the Updated AERA Triggers (AERA Required) requirement. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)] For changes that do not require a moderate or major amendment, but require a minor permit amendment, written approval of the EBD modeling may be given before permit issuance; however, this approval applies only to the EBD modeling and not to any other changes.	Delete the AERA Triggers. If a change does not require a permit amendment, any remodeling and risk re-evaluation can wait until the next permit or amendment application. To the extent that any risk analysis updates are retained, it should only involve an updated RASS, as Water Gremlin has only prepared a RASS for this permit, not an AERA. The term "Updated AERA" is not defined. It is unclear if this requirement is solely for an updated RASS. Water Gremlin has not prepared an AERA for the facility to date.	Updated AERA Submittal at Reissuance: The Permittee shall submit an Updated AERA Submittal with the permit reissuance application (due as stated elsewhere in this permit) that addresses any changes made during the permit term that did not require a permit amendment but that affected any 1,2- (trans-) Dichloroethylene , lead, and other air toxics parameter or emission rate documented in Appendix C, or an addition to the information documented in Appendix C and that did not trigger the Updated AERA Triggers (AERA Required) requirement. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]	No	Yes
26	5.1.41		Delete. This is not standard practice. If a change does not require a permit amendment, any remodeling and risk re-evaluation can wait until the next permit or amendment application.	Same language as July 2022 Draft Permit.	No	Yes
26	5.1.42	Updated AERA Submittal: For changes meeting the criteria in the Updated AERA Triggers (AERA Required) requirement, the Permittee shall submit an updated AERA submittal in accordance with the current version of the MPCA Air Dispersion Modeling Guidance and shall wait for written approval (for major amendments, in the form of an issued permit amendment; for moderate amendments, in the form of a construction authorization letter) before making such changes. For changes that do not require a moderate or major amendment, but require a minor permit amendment, written approval of the updated AERA may be given before permit issuance; however, this approval applies only to the updated AERA and not to any other changes. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]	Delete. This is not standard practice. If a change does not require a permit amendment, any remodeling and risk re-evaluation can wait until the next permit or amendment application. Also, the term "Updated AERA" is not defined and is unclear from agency permit staff. Water Gremlin has only submitted RASS to date.	Same language as July 2022 Draft Permit.	No	Yes
26	5.1.44	Updated AERA Submittal Content: The information submitted must include, for stack and vent sources, source emission rate, location, height, diameters, exit velocity, exit temperature, discharge direction, use of rain caps or rain hats, and, if applicable, locations and dimensions of nearby buildings. For non-stack/vent sources, this includes the source emission rate, location, size and shape, release height, and, if applicable, any emission rate scalars, and the initial lateral dimensions and initial vertical dimensions and adjacent building heights. If this information is being submitted with a concurrent EBD modeling submittal, this information only needs to be listed once in the combined submittal. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]	Delete as repetitive: modeling and AERA use the same information. MPCA does not need this information twice. No AERA prepared to date.	Same language as July 2022 Draft Permit.	No	No
26	5.1.45	Prior to conducting the EBD analysis, the Permittee shall use the current version of the MPCA Air Dispersion Modeling Guidance to determine if the Baseline Modeling (the most recent refined modeling demonstration) is consistent with the current version of the MPCA Air Dispersion Modeling Guidance (not outdated).	This is vague and ambiguous. There is no indication of what "outdated" means. The Permittee should not be subject to subjective standards and unclear triggering requirements.	Same language as July 2022 Draft Permit.	No	No
27	5.1.46	Outdated Baseline AERA: Prior to conducting the AERA analysis, the Permittee shall use the current version of the MPCA Air Dispersion Modeling Guidance to determine if the Baseline AERA (the most recent AERA demonstration) is consistent with the current version of the MPCA Air Dispersion Modeling Guidance (not outdated).	This is vague and ambiguous. There is no indication of what "outdated" means. The Permittee should not be subject to subjective standards and unclear triggering requirements. Water Gremlin has only prepared a RASS, not an AERA.	Same language as July 2022 Draft Permit.	No	No
27	5.1.47	EBD Modeling Results: The dispersion characteristics due to the revisions of the information in Appendix C must be equivalent to or better than the dispersion characteristics modeled in the most recent approved modeling submittal that shows compliance with NAAQS.	This condition should provide for a scenario in which the dispersion characteristics are not equivalent or better. The term "equivalent to or better" is vague and ambiguous. It is possible for a stack or vent to have worse dispersion but for the model to still show compliance with the NAAQS/toxics thresholds.	Same language as July 2022 Draft Permit.	No	No

EXHIBIT 2
 Spreadsheet Summary of Water Gremlin Comments on July 2022 Draft Permit and January 2023 Re-Noticed Draft Permit, and Status of Comment Resolution dated March 3, 2023
 PAGE 4 OF 15

27	5.1.48	Updated AERA Results: The dispersion characteristics due to the revisions of the information in Appendix C must be equivalent to or better than the dispersion characteristics modeled in the most recent approved modeling submittal that shows modeled compliance with NAAQS and health benchmarks.	This condition should provide for a scenario in which the dispersion characteristics are not equivalent or better. The term "equivalent to or better" is vague and ambiguous. It is possible for a stack or vent to have worse dispersion but for the model to still show compliance with the NAAQS/toxics thresholds.	Updated AERA Results: The dispersion characteristics due to the revisions of the information in Appendix C must be equivalent to or better than the dispersion characteristics modeled in the most recent approved modeling submittal that shows modeled compliance with NAAQS and health-based guidance values benchmarks.	No	No
27	5.1.49	Computer Dispersion Modeling Triggers for PM10, PM2.5, NO2, and lead NAAQS: The Permittee shall conduct a refined remodeling analysis in accordance with the Computer Dispersion Modeling requirements of this permit and the current version of the MPCA Air Dispersion Modeling Guidance if: (1) the results of the EBD modeling analysis do not demonstrate equivalent or better dispersion characteristics; (2) a conclusion cannot readily be made about the dispersion, or (3) the criteria in the EBD Modeling Triggers requirement are met and the Permittee has previously conducted three successive EBD analyses using the same Baseline Modeling, unless written approval is obtained from MPCA to get an exception from this maximum number of allowed EBD analyses. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)] The Permittee shall continue to conduct VOC and TO-15 Ambient Air Monitoring that was required my MPCA before issuance of Permit No. 12300341-101. Ambient air monitoring shall be conducted in accordance with the MPCA-approved VOC ambient air monitoring plan in the Administrative Order dated January 17, 2020, and included in this permit as Appendix F. This monitoring plan shall continue until the time the MPCA approves a revised ambient monitoring plan. The permittee shall compile 24-hour VOC and TO-15 monitoring results by the last day of each month for the previous monitoring month. The results shall be reported to AQRoutineReport.PCA.state.mn.us and made available to MPCA at any other time. [Minn. R. 7007.0800, subp. 2, Minn. R. 7009.0010-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]	Delete requirement 3. Depending on operational changes, three successive analyses does not necessarily mean full re-modeling is warranted.	Same language as July 2022 Draft Permit.	No	Yes
28	5.1.53	The Permittee shall submit a revised ambient monitoring plan for VOC and TO-15 Ambient Air Monitoring due within 30 days of permit issuance. The revised ambient monitoring protocol shall address the following as described in Appendix H 1) Number and locations of monitoring sites following EPA siting requirements. 2) Sampling frequency 3) Data submittal frequency 4) TO-15 analytes include 1,2-(trans-) Dichloroethylene. [Minn. R. 7007.0800, subp. 2, Minn. R. 7009.0010-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]	There is no scientific justification for ongoing ambient air monitoring. Water Gremlin has collected (and provided on a simultaneous basis) three years of ambient air data at a cost of more than \$1.5MM per year (as required under the Unilateral Administrative Order). Water Gremlin has also provided the MPCA with a compliant model. There is no factual, scientific basis or legal requirement for ambient air monitoring based on the toxicity evaluation, the model and the collection of over two years of data. The facility has years of data representing operating conditions that validate the facility's tracking spreadsheet. The MPCA is well aware that ambient monitoring is unreliable as monitor results vary not only with, material usage, but with meteorology and outside influences. The facility is meeting detailed tracking and mass-balance requirements.	The Permittee shall continue to conduct VOC and TO-15 Ambient Air Monitoring that was required my by MPCA before issuance of Permit No. 12300341-101. Ambient air monitoring shall be conducted in accordance with the MPCA-approved VOC ambient air monitoring plan in the Administrative Order dated January 17, 2020, and included in this permit as Appendix F. This monitoring plan shall continue until the time the MPCA approves a revised ambient monitoring plan. The permittee shall compile 24-hour VOC and TO-15 monitoring results by the last day of each month for the previous monitoring month. The results shall be reported to AQRoutineReport.PCA.state.mn.us and made available to MPCA at any other time. [Minn. R. 7007.0800, subp. 2, Minn. R. 7007.0800, subps. 4(C) & (D) 7009.0010-7009.0090, Minn. Stat. 116.385, subd. 3, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]	No	Yes
28	5.1.54	The Permittee shall submit a revised ambient monitoring plan for VOC and TO-15 Ambient Air Monitoring due within 30 days of permit issuance. The revised ambient monitoring protocol shall address the following as described in Appendix H 1) Number and locations of monitoring sites following EPA siting requirements. 2) Sampling frequency 3) Data submittal frequency 4) TO-15 analytes include 1,2-(trans-) Dichloroethylene. [Minn. R. 7007.0800, subp. 2, Minn. R. 7009.0010-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]	Delete. See above. The risk evaluation, existing data and modeling demonstrate compliance with permit conditions, well below the applicable risk criteria.	The Permittee shall submit a revised ambient monitoring plan for VOC and TO-15 Ambient Air Monitoring due within 30 days of permit issuance. The revised ambient monitoring protocol shall address the following as described in Appendix H 1) Number and locations of monitoring sites following EPA siting requirements. 2) Sampling frequency: during the first 365 days beginning on permit issuance date, the sampling frequency must remain as in the MPCA-approved VOC ambient air monitoring plan in the Administrative Order dated January 17, 2020 and included as Appendix F in this permit 3) Data submittal frequency 4) TO-15 analytes include 1,2-(trans-) Dichloroethylene. [Minn. R. 7007.0800, subp. 2, Minn. R. 7007.0800, subps. 4(C) & (D), 7009.0010-7009.0090, Minn. Stat. 116.385, subd. 3, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]	No	Yes
28	5.1.56	The Permittee shall conduct VOC and TO-15 Ambient Air Monitoring due within 30 days following approval of revised ambient air monitoring plan. Ambient air monitoring shall be conducted in accordance with the MPCA-approved Revised VOC ambient air monitoring plan. The VOC and TO-15 ambient monitoring may not be interrupted during the transition of ambient monitoring to the revised plan. [Minn. R. 7007.0800, subp. 2, Minn. R. 7009.0010-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]	Delete. See above. Water Gremlin has three years of ambient VOC data monitoring already.	The Permittee shall conduct VOC and TO-15 Ambient Air Monitoring due within 30 days following approval of revised ambient air monitoring plan. Ambient air monitoring shall be conducted in accordance with the MPCA-approved Revised VOC ambient air monitoring plan. The VOC and TO-15 ambient monitoring may not be interrupted during the transition of ambient monitoring to the revised plan. [Minn. R. 7007.0800, subp. 2, Minn. R. 7007.0800, subps. 4(C) & (D), 7009.0010-7009.0090, Minn. Stat. 116.385, subd. 3, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]		Yes

		Discontinuation of VOC Ambient Air Monitoring: The Permittee shall operate and maintain the VOC ambient air monitoring network according to the MPCA approved Ambient Air Monitoring Plan until the Commissioner determines that the following criteria have been met:				Discontinuation of VOC Ambient Air Monitoring: The Permittee shall operate and maintain the VOC ambient air monitoring network according to the MPCA approved Ambient Air Monitoring Plan until the Commissioner determines that the following criteria have been met: 1) At least twenty Twenty -four months of ambient air monitoring is conducted after permit issuance pursuant to the Ambient Air Monitoring Plan approved by MPCA and implemented as prescribed elsewhere in this permit; 2) a) The minimum a) The minimum twenty four months of ambient monitoring after permit issuance shall exclude periods when Water Gremlins shuts down t-DCE coating operations so that the length of the ambient monitoring period represents 24 months of measured ambient concentrations during actual coating operation with t-DCE containing materials. Periods of coating operations shutdowns do not include days when operation would normally stop due to weekends and holidays if each of these periods does not exceed more than five consecutive days. This minimum twenty-four months of ambient monitoring after permit issuance will be referred to as the ambient monitoring period under evaluation for approval of discontinuation of ambient monitoring for 1,2-(trans-) Dichloroethylene. b) At least 75 percent of scheduled samples in a calendar year and at least 75 percent of samples in a 3-month quarter for the ambient monitoring period are needed to produce valid summary statistics and meet completeness requirements. 3) 2) There are no violations exceedances of the 1,2-(trans-) Dichloroethylene Risk Assessment Advise of 20 µg/m3 as a 365-day rolling average of measurements at any active monitoring site during the ambient air monitoring period under evaluation for approval of discontinuation of ambient monitoring for 1,2- (trans-) Dichloroethylene emission limit during the 24 months of actual coating operation; 4) 3) The facility's 1,2-(trans-) Dichloroethylene emissions are at least 80 percent of the permitted limit are less than or equal to 32.6 tons per year based on a 365-day rolling sum during the ambient air monitoring period under evaluation for approval of			
27	5.1.57	1) Twenty four months of ambient air monitoring is conducted pursuant to the Ambient Air Monitoring Plan approved by MPCA and implemented as prescribed elsewhere in this permit; 2) The twenty four months of ambient monitoring shall exclude periods when Water Gremlins shuts down t-DCE coating operations so that the length of the ambient monitoring period represents 24 months of measured ambient concentrations during actual coating operation with t-DCE containing materials. 3) There are no violations of the 1,2-(trans-) Dichloroethylene emission limit during the 24 months of actual coating operation; 4) The facility's 1,2-(trans-) Dichloroethylene emissions are at least 80 percent of the permitted limit	Delete. Existing usage data shows the conditions are already being met (coating usage and ambient data). See above. Water Gremlin believes ongoing ambient air monitoring is unnecessary, and has already provided three years of monitoring data. It is counterintuitive and counterproductive to require a high level of usage emissions in order to discontinue monitoring, when the facility has stated its long-term plans to increase UV coating and reduce solvent coating. The trigger for discontinuing ambient monitoring should be tied to reduced VOC-based coating usage. It is illogical to encourage high usage rather than low usage as the company moves away from VOC-based coating. As stated in Water Gremlin's cover letter on the draft permit, the MDH's health benchmark was improperly extrapolated and derived. EPA's PPRTV for TDCE is the more appropriate health benchmark to use for determining the overall facility emissions limit.					No	No; we have new comments
30	5.1.63	The Permittee shall secure these access points with a locked and/or monitored gate or other physical barrier precluding access by the general public.	Permittee has fencing and security procedures.		Same language as July 2022 Draft Permit.			No	Yes
30	5.1.65	Commercial Disclosure Regarding Facility Emissions Into the Community: The Permittee shall conduct a meeting annually to disclose factual information to the community regarding facility operations, changes made or planned to reduce air emissions, management of hazardous materials and compliance with environmental permits and regulations. The Permittee shall provide the time, date, location, format, and agenda of the meeting to the MPCA 60 days before the meeting. [Minn. R. 7007.0800, subp. 2(B), Minn. Stat. 116.07, subd. 9(2)]	There is no provision under Minnesota law that requires the Permittee to conduct annual meetings, and no such requirement should be included in the permit. This comment applies to all similar requirements in the permit.		Same language as July 2022 Draft Permit.			No	Yes
30	5.2.1	COMG 1 VOC limit The Permittee shall limit emissions of 1,2-(trans-) Dichloroethylene <= 32.6 tons per year 365-day rolling sum to be calculated each operating day for the previous 365-day period as described later in this permit. All 1,2-(trans-) Dichloroethylene-emitting equipment and operations at the facility is subject to this limit.	Limit should be on TFAC level, not COMG 1.		Same language as July 2022 Draft Permit.			No	No
31	5.2.2 [now 5.2.4 with new 5.2.2 and 5.2.3]	1,2-(trans-) Dichloroethylene emissions shall be calculated based on the methods described elsewhere in this permit. 1,2-(trans-) Dichloroethylene content in VOC-containing material shall be determined by assuming the entire VOC content is 1,2-(trans-) Dichloroethylene as described under the Material Content requirement in Appendix B. The 1,2-(trans-) Dichloroethylene emissions released outside the coating rooms must also be included as described elsewhere in this permit. The calculation of 1,2-(trans-) Dichloroethylene emissions may take into account the 1,2-(trans-) Dichloroethylene that exits the facility as waste as described under the Waste Credit requirement in COMG 1, but only if the Permittee separately quantifies the specific 1,2-(trans-) Dichloroethylene content in the waste material as described elsewhere in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]	Revise based on EPA PPRTV toxicity data. See Water Gremlin's comments on the draft permit in the cover letter. The 32.6 TPY derives from the misapplication of the 20 ug/m3 limit and ambient monitoring data using a 365-day rolling average instead of a long-term average. Application of the EPA PPRTV reflects a 40 chronic and 400 sub-chronic health benchmark. This translates to an allowable coating usage limit of more than 100 TPY based on risk thresholds. As described in Water Gremlin's comments on the draft permit in the cover letter, the company proposed a reasonable TDCE limit and phase down as it converts its operations to UV coating systems. This proposal was rejected by the MPCA. If this limit includes non-coating rooms, it should be at TFAC level, not at the COMG 1 level. See above comments. The inventory tracking and mass balance approach conservatively assumes what is used and emitted, therefore separate quantification of TDCE and waste material is not necessary.		Emission Limit Effective on the 366th Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of 1,2-(trans-) Dichloroethylene <= 32.6 tons per year 365-day rolling sum to be calculated each operating day for the previous 365-day period as described later in this permit. All 1,2-(trans-) Dichloroethylene-emitting equipment and operations at the facility is subject to this limit. 1,2-(trans-) Dichloroethylene emissions shall be calculated based on the methods described elsewhere in this permit. 1,2-(trans-) Dichloroethylene content in VOC-containing material that includes 1,2-(trans-) Dichloroethylene shall be determined by assuming the entire VOC content is 1,2-(trans-) Dichloroethylene as described under the Material Content requirement in Appendix B. The 1,2-(trans-) Dichloroethylene emissions released outside the coating rooms must also be included as described elsewhere in this permit. The calculation of 1,2-(trans-) Dichloroethylene emissions may take into account for the 1,2-(trans-) Dichloroethylene that exits the facility as waste as described under the Waste Credit requirement in COMG 1, but only if the Permittee separately quantifies the specific 1,2-(trans-) Dichloroethylene content in the waste material as described elsewhere in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]			No	Yes

31	5.2.3 [now 5.2.5 with new 5.2.2 and 5.2.3]	1,2-(trans-) Dichloroethylene Quarterly Purchase Audit: Each calendar quarter, the Permittee shall audit purchase records and existing inventory of 1,2-(trans-) Dichloroethylene VOC-containing material, 1,2-(trans-) Dichloroethylene VOC-containing material usage records and keep records of each audit. If the estimates of use of 1,2-(trans-) Dichloroethylene VOC-containing material based on the purchase and inventory audit shows amounts of use 20 percent or greater than what was calculated based on daily usage logs described elsewhere in the permit, the Permittee shall review and correct as needed the procedures for the daily record keeping of use of 1,2-(trans-) Dichloroethylene VOC-containing material. The audit and records of corrections shall be made available for inspection upon request. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]	Excessive audit requirement. Annual audits are sufficient.	See above comment. There is a significant delta between max usage and actual usage, and MPCA can review all tracking data.	Additional citation for Minn. Stat. 116.385, subd. 3. Same language otherwise.	No	No
31	5.2.4 [now 5.2.6 with new 5.2.2 and 5.2.3]	Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain a record of the total weight of each VOC-containing material used in coating operations. This shall be based on written usage logs. Written usage logs shall include all data and calculations used to obtain the recorded weight(s) of each VOC-containing material used. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]	Daily recordkeeping should instead be weekly or monthly. The VOC limit is an annual limit and the t-DCE health-based standards are long-term chronic standards.	Same language as July 2022 Draft Permit.	No	Yes	
31	5.2.5 [now 5.2.9 with new 5.2.2, 5.2.3, 5.2.7, and 5.2.8]	Volatile Organic Compounds: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate, record, and maintain a record of the following for the previous operating day: 1) total weight of each VOC coating and solvent used in COMG 1, in tons; 2) total weight of each VOC-containing material used in COMG 1, including fresh solvent and solvent recovered on-site from the distiller, in tons; 3) total weight of VOC-containing material recovered on-site from the distiller, in tons; 4) total weight of water-based coating used in COMG 1, in tons; 5) total weight of UV coating used in COMG 1, in tons; 6) total weight of VOC-containing material that leaves the facility as waste according to the Waste Credit requirement if taking credit for compliance with the VOC emission limit, in tons; 7) daily VOC emissions for all equipment in COMG 1 for the previous operating day using the formulas specified elsewhere in this permit; 8) 365-day rolling sum VOC emissions for all equipment in COMG 1 for the previous 365 day period by summing the daily VOC emissions data for the previous 365 day. [Minn. R. 7007.0800, subps. 4-5]	See above. Daily recordkeeping should instead be weekly or monthly. The VOC limit is an annual limit and the t-DCE health-based standards are long-term chronic standards.	Volatile Organic Compounds: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate, record, and maintain a record of the following for the previous operating day: 1) total weight of each VOC coating and solvent used in COMG 1, in tons; 2) total weight of each VOC-containing material used in COMG 1, including fresh solvent and solvent recovered on-site from the distiller, in tons; 3) total weight of VOC-containing material recovered on-site from the distiller, in tons; 4) total weight of water-based coating used in COMG 1, in tons; 5) total weight of UV coating used in COMG 1, in tons; 6) total weight of VOC-containing material that leaves the facility as waste according to the Waste Credit requirement if taking credit for compliance with the VOC emission limit, in tons; 7) daily VOC emissions for all equipment in COMG 1 for the previous operating day using the formulas specified elsewhere in this permit; 8) 365-day rolling sum VOC emissions for all equipment in COMG 1 for the previous 365 day period by summing the daily VOC emissions data for the previous 365 days; and 9) the daily emissions calculations of the 365-day rolling sum of VOC emissions for the first year of operation after permit issuance must include the daily VOC emissions from the corresponding previous 365 days of operation before permit issuance that was reported as required by the Stipulation Agreement dated March 1, 2019 and the Administrative Order dated January 17, 2020. [Minn. R. 7007.0800, subps. 4-5]	No	Yes	
31	5.2.6 [now 5.2.10 with new 5.2.2, 5.2.3, 5.2.7, and 5.2.8]	1,2-(trans-) Dichloroethylene: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day:	See above. Daily recordkeeping should instead be weekly or monthly. The VOC limit is an annual limit and the t-DCE health-based standards are long-term chronic standards.	Same language as July 2022 Draft Permit.	No	Yes	

31	5.2.6(7)-(9) [now 5.2.10(7)-(9) with new 5.2.2, 5.2.3, 5.2.7, and 5.2.8]	<p>6) total weight of 1,2-(trans-) Dichloroethylene that left the facility as waste following the procedures in Appendix B to determine the 1,2-(trans-) Dichloroethylene content if taking credit for compliance with the 1,2-(trans-) Dichloroethylene emission limit, in tons;</p> <p>7) total weight of fugitive 1,2-(trans-) Dichloroethylene emissions based on measured indoor air concentrations in non-coating rooms using the concentrations and procedures in Appendix B, in tons;</p> <p>8) total weight of 1,2-(trans-) Dichloroethylene emissions using the formulas specified in this permit; and</p> <p>9) 365-day rolling sum of 1,2-(trans-) Dichloroethylene emissions for the previous 365 day period by summing the daily 1,2-(trans-) Dichloroethylene emissions data for the previous 365 days. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>	<p>Strike this language. Fugitive emissions have been evaluated and modeled with a safety factor that eliminates the need for daily recordkeeping or ongoing sampling.</p> <p>This calculation should be based on the value in 5.2.10 unless it is updated as described in Appendix B.</p> <p>Note that this value will begin to be calculated upon permit issuance and will not be back-calculated from previous data.</p> <p>Note that this value will begin to be calculated upon permit issuance and will not be back-calculated from previous data.</p>	<p>6) total weight of 1,2-(trans-) Dichloroethylene that left the facility as waste following the procedures in Appendix B to determine the 1,2-(trans-) Dichloroethylene content if taking credit for compliance with the 1,2-(trans-) Dichloroethylene emission limit, in tons;</p> <p>7) total weight of fugitive 1,2-(trans-) Dichloroethylene emissions based on measured indoor air concentrations in non-coating rooms using the concentrations and procedures default uncaptured emission rate in 5.2.14, unless updated as described in Appendix B, in tons;</p> <p>8) total weight of 1,2-(trans-) Dichloroethylene emissions using the formulas specified in this permit;</p> <p>9) during the first 365 days beginning on the date of permit issuance, the cumulative sum of 1,2- (trans-) Dichloroethylene emissions accumulated beginning on the date of permit issuance; and</p> <p>9) 10) beginning on the 366th day following permit issuance date and daily thereafter, the 365-day rolling sum of 1,2-(trans-) Dichloroethylene emissions for the previous 365-day period by summing the daily 1,2-(trans-) Dichloroethylene emissions data for the previous 365 days. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090 Stat. 116.385, subd. 3, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>	No	No
	VOC Monthly Calculations methodology equation			The emission factor for UV coating allowed by this permit 0.0031 0.0044 lb VOC/lb coating. The requirements to approve the use of other VOC emission factors are defined elsewhere in this permit.		
32	5.2.7 [now 5.2.11 with new 5.2.2, 5.2.3, 5.2.7, and 5.2.8]	F# = VOC emission factor from water-based coating, as lb VOC/lb coating. The emission factor for water-based coating allowed by this permit 0.0057 lb VOC/lb coating. The requirements to approve the use of other VOC emission factors are defined elsewhere in this permit.	The emission factor for VOCs presented here is incorrect. The VOCs associated with the water-based coating have a VOC content of 0.001%, or 0.00001 lb VOC/lb water-based solids. Water Gremlin tracks the amount of solids in their formulation, so the corrected equation is: VOC from water-based coating = total weight of solids in water-based coating * 0.00001 lb VOC/lb solids.	E# = total weight of each water-based coating used in COMG 1 based on daily usage logs, in tons/month; F# = VOC emission factor from water-based coating, as lb VOC/lb coating coating solids . The emission factor for water-based coating allowed by this permit 0.0057 0.00001 lb VOC/lb coating solids .	Yes	No
33	5.2.8 [now 5.2.12 with new 5.2.2, 5.2.3, 5.2.7, and 5.2.8]	Regarding daily calculations.	See above. Daily recordkeeping should instead be weekly or monthly. The VOC limit is an annual limit and the t-DCE health-based standards are long-term chronic standards.	K = default daily uncaptured 1,2-(trans-) Dichloroethylene emissions based on measured indoor air concentrations of non-coating rooms, in tons/day, as described elsewhere in this permit. The daily calculations must include all significant digits as described in in 5.2.14. [Minn. R. 7007.0800, subps. 4-5, Minn. Stat. 116.385, subd. 3]	No	Yes with additions
33	5.2.9 [now 5.2.13 with new 5.2.2, 5.2.3, 5.2.7, and 5.2.8]	Daily Reporting: The Permittee shall continue to comply with the requirements of all effective enforcement documents until those documents are terminated by MPCA. As of issuance of Permit No. 12300341-101, these enforcement documents include the Stipulation Agreement executed March 1, 2019, and the Administrative Order signed January 17, 2020. These documents are included for reference as Attachments 5 and 6 to the TSD of this permit, respectively. [Minn. R. 7007.0800, subp. 2(A) & (B)]	Agreement and Order should be terminated upon permit issuance; requirements are already included in the permit.	Same language as July 2022 Draft Permit.	No	Yes
33	5.2.10 [now 5.2.14 with new 5.2.2, 5.2.3, 5.2.7, and 5.2.8]	<p>1,2-(trans-) Dichloroethylene: Default Uncaptured Emission Rate. The Default Uncaptured Emission Rate to be used based on measured indoor air concentrations in non-coating rooms for the purposes of calculating total daily 1,2-(trans-) Dichloroethylene emissions are defined as follows:</p> <p>Default 1,2-(trans-) Dichloroethylene Uncaptured Emission Rate = 0.00324 tons/day The Permittee shall add this value (K) to the total daily 1,2-(trans-) Dichloroethylene emissions following the requirements of this permit. The Permittee may change the default uncaptured emission rate following the requirements specified in this permit and the procedures in Appendix B. [Minn. R. 7007.0800, subps. 4-5]</p>	This requirement is unnecessary.	<p>Default 1,2-(trans-) Dichloroethylene Uncaptured Emission Rate = 0.00324 0.003104 tons/day</p> <p>The Permittee shall add this value (K) to the total daily 1,2-(trans-) Dichloroethylene emissions following the requirements of this permit and must include all significant digits. The Permittee may change the default uncaptured emission rate following the requirements specified in this permit and the procedures in Appendix B. [Minn. R. 7007.0800, subps. 4-5, Minn. Stat. 116.385, subd. 3]</p>	No	No

34	5.2.12 [now 5.2.16 with new 5.2.2, 5.2.3, 5.2.7, and 5.2.8]	<p>1,2-(trans-) Dichloroethylene: Reconciliation of Predicted Stack Concentration and CEMS (EQUI 176) Readings.</p> <p>By 4:30pm each coating operating day, the Permittee shall calculate and record the predicted stack concentration of 1,2-(trans-) Dichloroethylene versus 1,2-(trans-) Dichloroethylene usage the following equation: $y = 0.1295x + 49.163$</p> <p>Where: $y =$ predicted 1,2-(trans-) Dichloroethylene stack concentration, in ppmv-wet of Total Hydrocarbon Concentration as 1,2-(trans-) Dichloroethylene; $x =$ 1,2-(trans-) Dichloroethylene usage, in pounds per day, from daily t-DCE containing VOC coating and solvent usage records. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. Stat. 116.07, subd. 9(2)]</p>	<p>This equation was established based on faulty correlation of CEMS results with VOC tracking data. The CEMS analyzes and reports total hydrocarbons while the VOC tracking data includes t-DCE but also natural gas and mitigation system assumed emissions, not actual emissions. Additionally, the CEMS results are reported based on the calibration times and are often approximately 10 am to 10 am. The VOC tracking sheet reports 6 am to 6 am. The CEMS should be discontinued and tracking against health benchmarks be based on t-DCE usage and inventory data.</p> <p>The stack CEMS does not measure t-DCE concentration. It measures total hydrocarbons and reports the results as "THC as t-DCE." As such, results have been improperly correlated by MPCA and the agency has years of data to verify these differences. The mass balance is sufficient as demonstrated by the Company's tracking over the last three years.</p>	<p>1,2-(trans-) Dichloroethylene: Reconciliation of Predicted Stack Concentration and Continuous Emission Monitoring System (CEMS, EQUI 176) Readings.</p> <p>By 4:30pm on each day of operation, the Permittee shall calculate, record, and maintain a record of the following for the previous operating day: 1) The predicted stack concentration of 1,2-(trans-) Dichloroethylene versus 1,2-(trans-) Dichloroethylene usage the following equation: $y = 0.1295x + 49.162$ 49.163</p> <p>Where: $y =$ predicted 1,2-(trans-) Dichloroethylene stack concentration, in ppmv-wet, of Total Hydrocarbon Concentration as 1,2-(trans-) Dichloroethylene; $x =$ 1,2-(trans-) Dichloroethylene usage, in pounds per day, from daily 1,2-(trans-) Dichloroethylene containing VOC coating and solvent usage records.</p> <p>AND</p> <p>2) The average daily concentration of the CEM (EQUI 176) measurements of Total Hydrocarbon Concentration, expressed as ppm-wet 1,2-(trans-) Dichloroethylene. The average daily concentration shall be calculated in the same manner it was calculated for the Total Hydrocarbon results submitted as required by the Administrative Order. The beginning of the daily period for this calculated average concentration must be aligned with the beginning of the corresponding coating operating day. The daily period for this calculated average concentration must be no less than 1425 minutes in total. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800 subp. 4(C) and (D), Minn. Stat. 116.385, subd. 3, Minn. Stat. 116.07, subd. 9(2)]</p>	No	Yes
34	5.2.13 [now 5.2.17 with new 5.2.2, 5.2.3, 5.2.7, and 5.2.8]	<p>Reconciliation of Predicted Stack Concentration and CEMS Readings Audit: If the daily CEMS (EQUI 176) reading exceeds the predicted 1,2-(trans-) Dichloroethylene stack concentration for that day, in ppmv-wet, the Permittee shall immediately audit the 1,2-(trans-) Dichloroethylene-containing material usage and inventory records to determine the cause of this discrepancy and shall report this as a deviation. The Permittee shall implement needed corrections based on this review. The Permittee shall keep records of each calculation, whether a deviation was observed, and whether a correction was made and how the correction was made. [Minn. R. 7007.0800, subps. 4-6, Minn. Stat. 116.07, subd. 9(2)]</p> <p>Maximum Contents of Materials and Process Rate: The Permittee assumed certain worst-case contents of materials and process rates when determining the short-term potential to emit of units in COMG 1. These assumptions are listed in Appendix B and Appendix C of this permit. Increasing the process rate or changing to a material that has a higher content of any of the given pollutants, or an addition of a pollutant not listed in Appendix B or Appendix C, is considered a change in method of operation that must be evaluated under Minn. R. 7007.1200, subp. 3 to determine if a permit amendment or notification is required under Minn. R. 7007.1150. [Minn. R. 7005.0100, subp. 35a]</p>	<p>Delete the CEMS requirement. CEMS for STRU73 is not necessary nor useful. See comment letter for further information.</p>	<p>Reconciliation of Predicted Stack Concentration and Continuous Emissions Monitoring System (CEMS, EQUI 176) Readings Audit: If the calculated average daily concentration of the CEMS measurements for Total Hydrocarbon Concentration expressed as ppm-wet 1,2-(trans-) Dichloroethylene exceeds the predicted 1,2-(trans-) Dichloroethylene stack concentration for that day, the Permittee shall immediately audit the 1,2-(trans-) Dichloroethylene-containing material usage and inventory records to determine the cause of this discrepancy and shall report this as a deviation that triggers the audit requirement. If an average daily concentration of the CEMS measurements of Total Hydrocarbon Concentration expressed as ppm-wet 1,2-(trans-) Dichloroethylene exceeds the predicted 1,2-(trans-) Dichloroethylene stack concentration for that day, this result in and of itself does not constitute an exceedance of the 1, 2-(trans-) Dichloroethylene emission limit defined elsewhere in this permit. If an average daily concentration of the CEMS measurements of Total Hydrocarbon Concentration expressed as ppm-wet 1,2-(trans-) Dichloroethylene exceeds the predicted 1,2-(trans-) Dichloroethylene stack concentration for that day, the permittee shall implement needed corrections based on this review. The Permittee shall keep records of each calculation, whether a deviation that triggered the audit was observed, and whether a correction was made and how the correction was made. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800 subp. 4C and D, Minn. R. 7007.0800, subps. 4-6, Minn. Stat. 116.385, subd. 3, Minn. Stat. 116.07, subd. 9(2)]</p>	No	Yes
34	5.2.15 [now 5.2.17 with new 5.2.2, 5.2.3, 5.2.7, and 5.2.8]	<p>7005.0100, subp. 35a]</p>	<p>Not all VOC from STRU 3 is t-DCE.</p>	<p>Same language as July 2022 Draft Permit.</p>	No	No

		VOC Coater Installation Requirements: The Permittee shall install and maintain each VOC coater to meet the following requirements:				
		1) Non-table top coatiers shall be fitted with a stainless steel catch pan designed to catch and minimize spills of coating material and any other contaminants associated with the coating process;				
		2) Table-top coatiers shall be placed in a catch pan or other secondary containment vessel designed to catch and minimize spills of coating material and any other contaminants associated with the coating process; and				
40	5.2.41 [now 5.2.45 after many changes to preceding sections]	3) Non-table top coatiers shall be enclosed on all sides, including the top. Concrete walls may not be utilized as part of the coater enclosure. [Minn. R. 7007.0800, subp. 2(A) & (B)]	Catch pans meant to prevent intrusion to the sub-slab, which is only applicable for VOC coating, not spray coating. This requirement should not be in this COMG and should be specified for VOC COMG only.	Same language as July 2022 Draft Permit.	No	No
		Battery Terminal Post Coatiers: Daily Maintenance. At the end of each shift on each operating day, the Permittee shall inspect each VOC, water-based, and UV coater in COMG 1 for coating spills and other materials in coater catch pans, secondary containment, and/or the floor. The Permittee shall clean and dispose of any coating material, hazardous waste, or other hazardous substance discovered in coater catch pans, secondary containment, or the floor in accordance with applicable state and local hazardous waste, solid waste, recycling and reuse regulations, and the material handling recommendations from the manufacturer of the coatings and solvents used. The Permittee shall keep records of coatiers cleaned and corrective actions taken to prevent spills. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. ch. 7045]				
41	5.2.42 [now 5.2.46 after many changes to preceding sections]	Each ultraviolet (UV) battery terminal post coater operated at the facility is subject to the requirements in COMG 5. This requirement does not apply to EQUI 117 and EQUI 240. [Minn. R. 7007.0800, subp. 2(A) & 2(B), Minn. R. 7007.0800, subps. 4-5, Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]	UV coating is not a hazardous waste. This requirement should be specific to VOC coatiers, if applicable.	Same language as July 2022 Draft Permit.	No	No
41	5.3.4	The Permittee is prohibited from using any coating that contains any hazardous air pollutant (HAP), including the target HAPs as defined under 40 CFR Section 63.11180. [Minn. R. 7007.0800, subp. 2(A)]	This is too general a statement. There are requirements in COMG 5 that do not apply to UV coatiers, such as catch pans and the VOC and water-based solvent formulations. Remove this requirement from COMG 2.	Same language as July 2022 Draft Permit.	No	No
41	5.3.5	PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of coating in the performance test report required by Minn. R. 7017.2035, subp. 1.	Redundant to 5.2.40, especially given above requirement. Also, UV formulation does not have HAPs.	Same language as July 2022 Draft Permit.	No	New comment
43	5.3.11		This applies to all instances where only Method 201A is identified. As discussed in the MPCA-WG-Stantec meeting on March 3, 2022, this is an important change to allow Water Gremlin the flexibility to conduct coater performance tests at the coater level instead of forcing testing to occur on STRU 73 due to insufficient duct sizes to allow for Method 201A.	Same language as July 2022 Draft Permit.	No	No

	5.3.12, 5.31.13, 5.31.16, 5.31.19, 5.32.13, 5.32.16, 5.33.13, 5.33.16, 5.33.19, 5.34.13, 5.34.16, 5.34.19, 5.41.12, 5.42.12, 5.42.15, 5.43.12, 5.43.15, 5.44.12, 5.44.15, 5.45.12, 5.45.15, 5.46.12, 5.46.15, 5.47.12, 5.47.15, 5.48.12, 5.48.15, 5.49.12, 5.49.15, 5.50.12, 5.50.15, 5.51.12, 5.52.12, 5.52.15, 5.53.12, 5.53.15, 5.54.12, 5.54.15, 5.55.12, 5.55.15, 5.56.12, 5.56.15, 5.57.12, 5.57.15, 5.58.12, 5.58.15, 5.59.12, 5.59.15, 5.60.12, 5.60.15, 5.61.12, 5.61.15, 5.62.12, 5.62.15, 5.63.12, 5.63.15, 5.3.14, 5.4.11, 5.4.14, 5.8.11, 5.8.14, 5.31.12, 5.31.15, 5.32.12, 5.32.15, 5.33.12, 5.33.15, 5.34.12, 5.34.15, 5.39.9, 5.39.12, 5.41.11, 5.41.14, 5.42.11, 5.42.14, 5.43.11, 5.43.14, 5.44.11, 5.44.14, 5.45.11, 5.45.14, 5.46.11, 5.46.14, 5.47.11, 5.47.14, 5.48.11, 5.48.14, 5.49.11, 5.49.14, 5.50.11, 5.50.14, 5.51.11, 5.51.14, 5.52.11, 5.52.14, 5.53.11, 5.53.14, 5.54.11, 5.54.14, 5.55.11, 5.55.14, 5.56.11, 5.56.14, 5.57.11, 5.57.14, 5.58.11, 5.58.14, 5.59.11, 5.59.14, 5.60.11, 5.60.14, 5.61.11,	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]	The permit has conditions that test plans need to be approved. There is no need for a major amendment to essentially approve a test plan if the protocol in 5.3.8 (or related) is not ideal for an emission factor test. This comment applies to every instance of this requirement for PM10 or PM2.5.	Same language as July 2022 Draft Permit.	No	No
43, 65-189						
43-193	5.57.14, 5.58.11, 5.58.14, 5.59.11, 5.59.14, 5.60.11, 5.60.14, 5.61.11,	The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit.	Allow Method 5 OR Method 201A. See previous comments on this issue. Combine COMG 4 and COMG 8 and delete repetitive requirements. Requirements can be made on individual EQUI level instead.	Same language as July 2022 Draft Permit.	No	No
43	COMG 4	COMG 4 The Permittee shall install, operate and maintain each VOC spray battery terminal post coater subject to COMG 4 requirements inside a coating room meeting the requirements of COMG 5 . [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]		Same language as July 2022 Draft Permit.	No	No
44	5.4.1		Redundant to COMG 5 requirement. All coaters in COMG 4 are also in COMG 5.	Same language as July 2022 Draft Permit.	No	No

EXHIBIT 2
Spreadsheet Summary of Water Gremlin Comments on July 2022 Draft Permit and January 2023 Re-Noticed Draft Permit, and Status of Comment Resolution dated March 3, 2023
PAGE 11 OF 15

		Each VOC spray battery terminal post coater subject to COMG 4 requirements is subject to the requirements in COMG 1. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]	Redundant to COMG 1 requirement. All coaters in COMG 4 are also in COMG 1.	Same language as July 2022 Draft Permit.	No	No
44	5.4.3	The Permittee is prohibited from using any coating that contains any hazardous air pollutant (HAP), including the target HAPs as defined under 40 CFR Section 63.11180. [Minn. R. 7007.0800, subp. 2(A)]	Redundant.	Same language as July 2022 Draft Permit.	No	No
46	5.5.1	The Permittee shall limit Coating Room Pressure Drop <= -0.007 inches of water, as established in Method 204 of appendix M to 40 CFR part 51. Pressure drop across the established enclosure shall be monitored at all times as described elsewhere in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]	The facility is not subject to 40 CFR 63 subp. Mmmm and should not be required to meet the requirements of that NESHAP. Documentation provided for maintaining any negative pressure is sufficient.	Additional citation for Minn. Stat. 116.385, subd. 3. Same language otherwise.	No	Yes
46-47	5.5.4, 5.5.7	Coating Room Pressure Drop Continuous Monitoring Devices: The Permittee shall install, operate, and maintain a pressure drop monitoring system (pressure drop gauge EQUI 169, EQUI 170 and EQUI 171 and building management system EQUI 168) for each enclosure meeting the following requirements and maintain records of compliance with these requirements:	The facility is not subject to 40 CFR 63 subp. Mmmm and should not be required to meet the requirements of that NESHAP.	Same language as July 2022 Draft Permit.	No	Yes
48	5.5.9	Daily Inspection: On each day of operation, the Permittee shall inspect the floor of each coating room where t-DCE VOC coaters operate to check for degradation of the Retro-Coat Vapor Intrusion Coating System and do the following (where applicable): 1) If degradation is discovered, the Permittee shall immediately resolve the degradation. 2) If the degradation is not resolved within 24 hours, the Permittee shall immediately cease VOC- coating operations in that coating room until the degradation is corrected. 3) Notify the MPCA immediately upon ceasing VOC coating operations due to degradation on the Retro-Coat Vapor Intrusion System. 4) Photographs of all degradation areas shall be taken before and after corrective actions are taken. Photographs shall be retained in Facility records. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. Stat. 116.385, subd. 3]	Permit requirements for coating floor inspections should be consistent with the floor management plan.	Additional citation for Minn. Stat. 116.07, subd. 4(a). Same language otherwise.	No	Yes
48	5.6.4	The Permittee shall keep records of fuel purchases showing fuel types. For the purpose of reporting emissions to the annual emission inventory. [Minn. R. 7007.0800, subp. 5, Minn. R. 7019.3000-7019.3100]	Not needed: as stated in 5.6.3, fuel type is natural gas only by design.	Same language as July 2022 Draft Permit.	No	Yes
48	COMG 8	COMG 8	The coaters in COMG 8 are the same as those in COMG 4. They do not need separate groups and separate (similar) requirements: the requirements could be on the EQUI level. See other comments from COMG 4.	Same language as July 2022 Draft Permit.	No	No
51	COMG 9	COMG 9	There need be no sub-slab mitigation system requirements in the air permit as the analysis showed no adverse impacts to emissions and no adverse health effects.	Same language as July 2022 Draft Permit.	No	Yes
51	5.9.1	The Permittee shall vent emissions from EQUI 167 to a stack/vent meeting the requirements of STRU 41 whenever EQUI 167 operates. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]	This is unnecessary and not a formal emission limit based on modeling but rather a threshold requiring changing of carbon canisters.	Same language as July 2022 Draft Permit.	No	Yes
51	5.9.2	The Permittee shall operate and maintain a Sub-Slab Depressurization and Solvent Vapor Extraction system (EQUI 167), and vent emissions to two 2,000-pound granulated activated carbon (GAC) canisters connected in-series (TREA 50 and TREA 51) such that all solvent vapor emissions from beneath the facility floor are captured and vented through the remediation stack (STRU 41) following the requirements of this permit.	Testing and modeling shows the GAC is unnecessary and does not belong in the air permit. The Remediation group oversees the mitigation system operation.	Same language as July 2022 Draft Permit.	No	Yes
51	5.9.4	The Permittee shall obtain a gas sample from the Solvent Vapor Extraction system at the locations and with the frequency required by the MPCA Remediation Division. If sampling is required, the Permittee shall send each sample to a third-party analytical laboratory for analysis following EPA Method TO-15. The requirement to conduct quarterly sampling of emissions from Solvent Vapor Extraction system terminates when the MPCA Remediation Division approves the removal of TREA 50 and TREA 51 in writing.	This should be removed from the permit as noted above.	Same language as July 2022 Draft Permit.	No	Yes
52	5.9.6	1,2-(trans-) Dichloroethylene: Emissions Calculations: If required by the MPCA, the Permittee shall calculate and record emission rates of 1,2-(trans-) Dichloroethylene and of all the other chemicals analyzed by EPA Method TO-15, in pounds per day, using the following equation:	This is not needed. Delete this requirement.	Same language as July 2022 Draft Permit.	No	Yes

EXHIBIT 2
Spreadsheet Summary of Water Gremlin Comments on July 2022 Draft Permit and January 2023 Re-Noticed Draft Permit, and Status of Comment Resolution dated March 3, 2023
PAGE 12 OF 15

52	5.9.10	Routine Inspections: The Permittee shall verify operation of the sub-slab vapor remediation system and visually inspect the condition of each carbon canister in COMG 9 with respect to alignment, saturation, and any other condition that may affect the filter's performance with the frequency required by MPCA Remediation Division. The Permittee shall maintain a daily written record of system and filter inspections. The requirement for routine inspections of carbon canisters terminates when the MPCA Remediation Division approves the removal of TREA 50 and TREA 51 in writing. [Minn. R. 7007.0800, subp. 2(A), Minn. Stat. 116.07, subd. 9(2)]	Quarterly inspections to match 5.9.11 are more appropriate.	Same language as July 2022 Draft Permit.	No	Yes
53	5.9.14	The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting Standard Exhaust Flow Rate allowed by this permit. [Minn. R. 7007.1500, subp. 1] Once each operating day, the Permittee shall visually inspect the condition of each control equipment train with respect to any other condition that may affect the control equipment train's performance.	Permittee must submit an approvable test plan, not a major permit amendment.	Same language as July 2022 Draft Permit.	No	No
55	5.11.8		Same comment as for 5.14.6 and 5.14.7. No set frequency for opening the Nederman filter units for inspection.	No changes for 5.11.8. See 5.14.6 [now 5.14.10].	Yes	No New comment: Inspections should be according to manufacturer's specifications only.
55-57	5.11.9 [now 5.11.13], 5.12.6 [now 5.12.11], 5.11.12 [now 5.11.16], 5.11.14 [now 5.11.17], 5.12.11 [now 5.12.16], 5.12.13 [now 5.12.18], 5.134.4, 5.134.6, 5.135.5, 5.135.7, 5.136.5, 5.136.7, 5.137.5, 5.137.7, 5.138.5, 5.138.7, 5.139.5, 5.139.7, 5.140.5, 5.140.7, 5.141.5, 5.141.7, 5.142.5, 5.142.7, 5.143.5, 5.143.7, 5.144.5, 5.144.7, 5.145.5, 5.145.7, 5.146.5, 5.146.7, 5.147.5, 5.147.7, 5.174.5, 5.174.7, 5.175.5, 5.175.7	At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment train components.	Same comment as for 5.14.6 and 5.14.7. No set frequency for opening the Nederman filter units for inspection.	Same language as July 2022 Draft Permit.	No	
55-57, 249-263, 287-288	5.147.5, 5.147.7, 5.174.5, 5.174.7, 5.175.5, 5.175.7	Smog Hog On/Off condition	This requirement is not necessary and not workable. The Nederman filter provides control for the diecast operations. The smog hogs are already required to be on during operations.	Same language as July 2022 Draft Permit.	No	Yes
56	5.11.16 [now 5.11.19]	The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance.	Leak-proof containers are not necessary to protect employee or public health.	Same language as July 2022 Draft Permit.	No	No
59	5.14.6 [now 5.14.10]	Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of each HEPA filter with respect to alignment, saturation, tears, holes and any other condition that may affect the filter's performance. The Permittee shall maintain a daily written record of filter inspections. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]	Water Gremlin has elected to use Nederman HEPA filters for the COMG 14 filter requirement. Similar changes are requested here as were granted for Nederman units on Diecast and Melt Pot operations. As per the Nederman recommendation, daily inspections should verify if the pressure drop reading is within the red or green areas of the gauge. The filters are not meant for frequent physical inspections, and daily door openings may damage the filters. Further, opening the doors will impact capture efficiency. See letter from the supplier dated August 18, 2022.	Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of each HEPA Nederman filter with respect to alignment, saturation, tears, holes, and any other condition that may affect the Nederman filter's performance. The Permittee shall maintain a daily written record of filter these inspections. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]	No	Yes
59	5.14.7 [now 5.14.11]	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]	Same comment as for 5.14.6. Manufacturer does not recommend opening the Nederman filter units for inspection on any particular frequency.	Same language as July 2022 Draft Permit.	No	Yes

EXHIBIT 2
Spreadsheet Summary of Water Gremlin Comments on July 2022 Draft Permit and January 2023 Re-Noticed Draft Permit, and Status of Comment Resolution dated March 3, 2023
PAGE 13 OF 15

	5.32.19, 5.41.12, 5.41.18, 5.42.18, 5.43.18, 5.44.18, 5.45.18, 5.46.18, 5.47.18, 5.48.18, 5.49.18, 5.50.18, 5.51.18, 5.52.18, 5.53.18, 5.54.18, 5.55.18, 5.56.18, 5.57.18, 5.58.18, 5.59.18, 5.60.18, 5.61.18, 5.62.18, 5.63.18, 5.64.18, 5.65.18, 5.66.18, 5.67.18, 5.68.18, 5.69.18, 5.71.18, 5.72.18, 5.73.18, 5.74.18, 5.75.17	Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]	Permittee needs an approvable test plan, not to submit a major permit application. Strike these sections. The throughput limit and recordkeeping data are sufficient to show compliance with the relevant PM and lead standards and the compliant modeling scenario. Daily emissions calculations are unnecessary and redundant. This comment applies to all die casting units.	Same language as July 2022 Draft Permit.	No	No
69, 81-184	5.41.5-5.41.7, 5.42.3-5.42.7, 5.41.10, 5.42.10, 5.43.10, 5.44.10, 5.45.10, 5.46.10, 5.47.10, 5.48.10, 5.49.10, 5.50.10, 5.51.10, 5.52.10, 5.53.10, 5.54.10, 5.55.10, 5.56.10, 5.57.10, 5.58.10, 5.59.10, 5.60.10, 5.61.10, 5.62.10, 5.63.10, 5.64.10, 5.65.10, 5.66.10, 5.67.10, 5.68.10, 5.69.10, 5.70.10, 5.71.10, 5.72.10, 5.73.10, 5.74.10	Daily calculation method	The potential for supply chain issues and the magnitude of change may require a compliance schedule for vent reconstruction due to conditions outside of Water Gremlin's control. Delete the CEMS requirement. CEMS for STRU73 is not necessary nor useful. See comment letter for further information.	Same language as July 2022 Draft Permit.	No	Yes
80, 83	5.41.5-5.41.7, 5.42.3-5.42.7, 5.41.10, 5.42.10, 5.43.10, 5.44.10, 5.45.10, 5.46.10, 5.47.10, 5.48.10, 5.49.10, 5.50.10, 5.51.10, 5.52.10, 5.53.10, 5.54.10, 5.55.10, 5.56.10, 5.57.10, 5.58.10, 5.59.10, 5.60.10, 5.61.10, 5.62.10, 5.63.10, 5.64.10, 5.65.10, 5.66.10, 5.67.10, 5.68.10, 5.69.10, 5.70.10, 5.71.10, 5.72.10, 5.73.10, 5.74.10	The Permittee shall vent uncaptured emissions from EQUI 121 to a stack/vent meeting the requirements of STRU 48 whenever EQUI 121 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]	The potential for supply chain issues and the magnitude of change may require a compliance schedule for vent reconstruction due to conditions outside of Water Gremlin's control. Delete the CEMS requirement. CEMS for STRU73 is not necessary nor useful. See comment letter for further information.	Same language as July 2022 Draft Permit.	No	No
81-180	EQUI 176	EQUI 176	Delete the CEMS requirement. CEMS for STRU73 is not necessary nor useful. See comment letter for further information.	Same language as July 2022 Draft Permit.	No	Yes
186, 292	5.96.5 [now 5.96.7], 5.115.5 [now 5.115.6], 5.116.1, 5.116.2, 5.116.4 [now 5.116.5], 5.116.5 [now 5.116.6], 5.118.5 [now 5.118.6], 5.119.5 [now 5.119.6], 5.120.5 [now 5.120.6], 5.121.5 [now 5.121.6],	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following:	Recordkeeping should be on EQUI level, not STRU level.	Same language as July 2022 Draft Permit.	No	Yes
193, 225-240	5.123.4 [now 5.123.6]	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following:	Recordkeeping should be on EQUI level, not STRU level.	Same language as July 2022 Draft Permit.	No	Yes

EXHIBIT 2
 Spreadsheet Summary of Water Gremlin Comments on July 2022 Draft Permit and January 2023 Re-Noticed Draft Permit, and Status of Comment Resolution dated March 3, 2023
 PAGE 14 OF 15

194, 225-240	5.96.6 [now 5.96.8], 5.115.6 [now 5.115.7], 5.116.3 [now 5.116.4], 5.116.6 [now 5.116.7], 5.117.6 [now 5.117.7], 5.118.6 [now 5.118.7], 5.119.6 [now 5.119.7], 5.123.6 [now 5.123.7]	Lead: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit:	Recordkeeping should be on EQUI level, not STRU level.	Same language as July 2022 Draft Permit.	No	Yes
195, 220	5.112.13]	Lead: Daily Calculations (365-Day Rolling Sum). STRU20L# = total daily lead emissions emitted through STRU 20, in pounds/day;	This provision is redundant to 5.96.9 and should be removed.	Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum).	No	Yes
202	5.100.9 [now 5.100.9]	STRU20L365S = 365-day rolling sum lead emissions emitted through STRU 21 for the previous 365-day period, in pounds/year;	I think this should be STRU 20.	STRU20L# = total daily lead emissions emitted through STRU 20, in pounds/day; STRU20L365RS = 365-day rolling sum lead emissions emitted through STRU 21 20 for the previous 365- day period, in pounds/year;	Yes	No
217	5.110.4 [now 5.110.5]	The Permittee shall limit emissions of Lead <= 0.9412 pounds per year 365-day rolling sum. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]	Redundant requirement met by quarterly lead throughput limit above.	Emission limit for the first 365 days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead <= 0.9412 pounds per year 365-day rolling sum. The cumulative amount must be calculated each operating day for the first 365 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090 , Minn. Stat. 116.07, subd. 4a(a)]	No	Yes
219	5.112.3	The Permittee shall limit emissions of Lead <= 0.01488 pounds per day 92-day rolling average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]	Listed emission rate does not reflect final modeling.	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead <= 0.01488 0.1305 pounds per day quarter 92-day rolling average sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]	Yes	Yes
219	5.112.7 [now 5.112.8]	PM < 10 micron: Daily Calculations.	This requirement is not necessary. Emissions from diecast machines are being calculated on the EQUI level.	Same language as July 2022 Draft Permit.	No	Yes
220	5.112.8 [now 5.112.9], 5.112.9 [now 5.112.11], 5.112.10 [now 5.112.13]	STRU43PM2.5 = EQUI124FPM2.5 + 0.014 + 0.00021	See previous comment on formula.	Same language as July 2022 Draft Permit.	No	No
221	5.113.5 [now 5.113.6]	2) The total daily average hourly PM2.5 emissions from STRU 44 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]	The annual lead limit through STRU 44 is redundant and unnecessary to show compliance with risk thresholds. The limit is at the COMG 12 level and only requires tracking the STRU 44 emissions from the diecast operations.	Same language as July 2022 Draft Permit.	No	Yes
221-222	5.113.7 [now 5.113.8], 5.113.8 [now 5.113.9]	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 44 using the following equation:	These are only the diecast emissions from STRU 44. This requirement is unnecessary. The EQUI-level recordkeeping is sufficient.	Same language as July 2022 Draft Permit.	No	Yes

5.113.9 [now 5.113.11], 5.113.10 [now 5.113.12], 5.114.8 [now 5.114.9], 5.114.9 [now 5.114.11], 5.114.10 [now 5.114.13], 5.115.7 [now 5.115.8], 5.115.9 [now 5.115.11], 5.116.8 [now 5.116.9], 5.116.9 [now 5.116.11], 5.116.10 [now 5.116.13], 5.117.7 [now 5.117.8], 5.117.8 [now 5.117.9], 5.117.9 [now 5.117.11], 5.118.7 [now 5.118.8], 5.118.8 [now 5.118.9], 5.118.9 [now 5.118.11],	Lead: Daily Calculations (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 44 using the following equations:	See previous comment: unnecessary requirement and wrong formula. To the extent these are retained, all of the Exhaust Fan emission formulas should be compared to the final Form GI-07.	5.114.8 [now 5.114.9] has the same language as July 2022 Draft Permit. The others have this edit: Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average).	No	Yes
222-249	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 45 using the following equation: STRU45PM10 = EQUI137FPM10 + EQUI138FPM10 + EQUI139FPM10 + EQUI140FPM10 + EQUI141FPM10+ 0.03093 where: STRU45PM10 = total daily average PM10 emissions emitted through STRU 45, in pounds/hour; EQUI137FPM10 = total daily average uncaptured PM10 emissions from EQUI 137, in pounds/hour; EQUI138FPM10 = total daily average uncaptured PM10 emissions from EQUI 138, in pounds/hour; EQUI139FPM10 = total daily average uncaptured PM10 emissions from EQUI 139, in pounds/hour; EQUI140FPM10 = total daily average uncaptured PM10 emissions from EQUI 140, in pounds/hour; EQUI141FPM10 = total daily average uncaptured PM10 emissions from EQUI 141, in pounds/hour; and 0.0303 = total daily average PM10 emission contribution from EQUI 107, EQUI 108 and EQUI 111, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5] Lead: Daily Calculations (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 46 using the following equations: STRU46L = EQUI142FL + EQUI143FL + EQUI155FL STRU46L365S = (STRU46L2 + STRU46L3 + STRU46L4 +...+ STRU46L364 + STRU46L365 + STRU46L366) - STRU46L1	Unnecessary requirement: EQUI-level recordkeeping and emission calculations are sufficient. Also, this formula is wrong: MAUs also vent through STRU 45. This constant does not match the formula above for 5.114.7. Both should be confirmed and corrected so they are consistent.	Constant fixed but otherwise same language as July 2022 Draft Permit. 0.0303 0.03093 = total daily average PM10 emission contribution from EQUI 107, EQUI 108 and EQUI 111, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5] Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 46 using the following equations: STRU46L = EQUI142FL + EQUI143FL + EQUI155FL STRU46L365RS = (STRU46L2 + STRU46L3 + STRU46L4 +...+ STRU46L364 + STRU46L365 + STRU46L366) - STRU46L1	No	Yes
5.114.7 [now 223 5.114.8]				Yes/No	Yes
5.115.10 [now 5.115.13], 5.117.10 [now 226, 230 5.117.13]		See above. Redundant to 5.103.9. Also redundant to tracking at EQUI level. To the extent these are retained, all of the Exhaust Fan emission formulas should be compared to the final Form GI-07.		No	Yes
227 5.116.7 [5.116.8]	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 47 using the following equation: STRU47PM10 = EQUI127FPM10 + EQUI128FPM10 + EQUI129FPM10 + 0.01510	See previous comments: unnecessary requirement as the EQUI-level tracking is sufficient. Wrong formula as MAUs also vent to STRU 47. To the extent these are retained, all of the Exhaust Fan emission formulas should be compared to the final Form GI-07.	Same language as July 2022 Draft Permit.	No	Yes

EXHIBIT 2
Spreadsheet Summary of Water Gremlin Comments on July 2022 Draft Permit and January 2023 Re-Noticed Draft Permit, and Status of Comment Resolution dated March 3, 2023
PAGE 16 OF 15

		Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of each HEPA filter with respect to alignment, saturation, tears, holes and any other condition that may affect the filter's performance. The Permittee shall maintain a daily written record of filter inspections.					
5.148.8, 5.148.9, 5.149.8, 5.149.9, 264 5.150.8, 5.150.9		[Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]	These are cartridge filter(s) not susceptible to damage. The unit is infrequently used. Delete this requirement.	Same language as July 2022 Draft Permit.	No	Yes	
		The Permittee shall submit a monthly Ambient Air Monitoring Report: due within 30 calendar days following the last day of each month after Initial Startup of the VOC monitors in accordance with the MPCA-approved Monitoring Plan. The report shall be certified by the responsible official as defined in Minn.R. 7007.0100, subp. 21(A). The VOC monitoring results shall be submitted to AQRoutineReport@pca.state.mn.us within 30 calendar days following the last day of the month following startup of the VOC monitors.					
289-290	6.1.4, 6.1.6, 6.1.7, 6.1.8	[Minn. R. 7007.0800, subps. 5-6]	See the comment letter. Ambient monitoring requirement should be removed.	Same language as July 2022 Draft Permit.	No	Yes	
		The Permittee shall submit an annual report by the 31st of January. The report shall document the VOC 365-day rolling sum calculations for the previous calendar year.	Delete this requirement. These data are provided elsewhere through other requirements. This is redundant.	Same language as July 2022 Draft Permit.	No	Yes	
290	6.2.1	The Permittee shall conduct a performance test due within 30 days of permit issuance and every 12 months thereafter to determine if each coating room in COMG 5 is a permanent total enclosure that meets the criteria of Method 204 of appendix M to 40 CFR pt. 51.	Redundant to conduct frequent testing as the negative pressure alarms from 6.3.1 are sufficient.	Same language as July 2022 Draft Permit.	No	Yes	
291	6.3.1		The emergency generator is already installed and operating. The listed requirements in this section are not appropriate.	Modified as 6.5.1-6.5.2 with new date timelines based on the Opacity Observation Date.	Yes	No	
291	EQUI 120	EQUI 120					
		6.6.1 [now 6.7.1], 6.7.1 [now 6.8.1], 6.8.1 [now 6.9.1], 6.9.1 [now 6.10.1], 6.10.1 [now 6.11.1], 6.11.1 [now 6.12.1], 6.12.1 [now 6.13.1], 6.13.1 [now 6.14.1], 6.15.1 [now 6.16.1], 6.16.1 [now 6.17.1], 6.17.1 [now 6.18.1], 6.18.1 [now 6.19.1], 6.19.1 [now 6.20.1], 6.22.1, 6.22.2, 6.22.3, 6.22.4, 6.22.5, 6.22.6, 6.22.7, 6.22.8, 6.23.1, 6.23.2, 6.23.3, 6.23.4, 6.23.5, 6.23.6, 6.23.7, 6.23.8	The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 11.	Not necessary to test each and every Smog Hog stack.	Same language as July 2022 Draft Permit.	No	Yes
292-344, 351-358	6.20.1, 6.20.2, 6.20.3		This is not a production-related emission point. Any and all testing of STRU 57 is unnecessary. This comment applies to all testing for Shipping Vent 20.	Language was removed.	Yes	No	

350	6.21.1, 6.21.2 The Permittee shall conduct a performance test due within 180 days following issuance of Permit No. 12300341-101 and every 60 months thereafter to measure emissions to verify compliance with the PM2.5 emission limit of 0.01012 pounds per hour daily average.	For STRU 73, Water Gremlin reserves the right to conduct any required testing at the applicable upstream emission units, similar to how Coater #6 was tested. Compliance with emission limits can be demonstrated best at the emission unit level. As has been discussed with MPCA on prior occasions, testing for extremely low levels of emissions in 15,000+ ACFM at STRU 73 will likely be problematic. This comment applies to all performance testing specified for STRU 73.	The Permittee shall conduct a performance test due within 180 days following issuance of Permit No. 12300341-101 and every 60 months thereafter to verify compliance with the PM10 emission limit of 0.01012 pounds per hour daily average. This test shall be conducted concurrently with the PM2.5 performance test. The permittee has the option to test each type of spray coater for uncontrolled emissions, controlled emissions, and control efficiency of the associated control equipment instead of testing (controlled) spray coater emissions from STRU 73 by following the requirements in Appendix E.	Yes	No
		The VOC content of water-based coating is 0.001%, or 0.00001 lb VOC/lb solids.	If the test results of controlled emissions measured at STRU 73 are above detection limits, the Permittee shall calculate emissions of all units operating during the test using the methods described elsewhere in this permit. The total emissions calculated in this manner shall be compared to the measured emissions during the test. If the calculated emissions are equal or higher than the measured emissions, the Permittee will continue to use the emission calculations prescribed in this permit. If measured emissions are higher than calculated emissions, the Permittee must submit a plan to revise emission factors within 30 days of receiving the Notice of Compliance.		
		Dip, not drip.	Changed 0.57 to 0.001 throughout table.		
		Foamex is no longer used at Water Gremlin.	Drip changed to dip.		
		These values contradict Section 5.2.10 with a value of 0.00324 tpd, and the calculation method for TDCE, which includes a single value for non-coating room fugitive emissions.	Language regarding Foamex removed.		
		We believe this link is incorrect. This is the Jan 17, 2020, Administrative Order. Is this what MPCA meant to include? https://www.pca.state.mn.us/waste/vapor-intrusion-best-management-practices	Changed 0.00466 tons per day to 0.003104 for Chemical Storage Room fugitive emissions and removed Other Non-Coating Rooms fugitive emissions altogether.		
361	Appendix B		Link corrected to commented link.	Yes	No
	Continuous emission monitor (CEM) emission rates shall be reported as parts per million, wet VOC, parts per million, wet 1,2-(trans-) Dichloroethylene (show conversion based on molecular weights), and pound per hour 1,2-(trans-) Dichloroethylene by using measured concentrations and measured flue gas rates during the test. The measurements must specifically measure concentration during the time of each of the stack test runs conducted that speciates for 1,2-(trans-) Dichloroethylene.				
391	2.1.5	See previous comments and comment letter.	If 1,2-(trans-) Dichloroethylene VOC stack test is conducted at STRU 73, the Continuous Emission Monitor System (CEMS) emissions shall be reported as a concentration , in parts per million wet VOC THC , parts per million, wet 1,2-(trans-) Dichloroethylene (show conversion based on molecular weights), and pound per hour 1,2-(trans-) Dichloroethylene by using measured concentrations and measured flue gas rates during the test.	No	Yes
			PM < 10 micron: The Permittee shall conduct a performance test due within 180 days following issuance of Permit No. 12300341-101 and every 60 months thereafter to verify compliance with the PM10 emission limit of 0.01012 pounds per hour daily average. This test shall be conducted concurrently with the PM2.5 performance test. The permittee has the option to test each type of spray coater for uncontrolled emissions, controlled emissions, and control efficiency of the associated control equipment instead of testing (controlled) spray coater emissions from STRU 73 by following the requirements in Appendix E.		
402	STRU 73	Water Gremlin reserves the opportunity to satisfy performance testing requirements at each coater instead of at STRU73. This was determined to be satisfactory during Coater 6 tests. The MDH RAA for t-DCE was 70 ug/m3 for most of this monitoring period. The dashed line is misleading. Additionally, the more appropriate value for inhalation as published by EPA in 2020 is 40 ug/m3, not 20 ug/m3, which is based on an ingestion study.		Yes	No
		Water Gremlin discontinued TCE use in early 2019 and provided a report discussing the TCE detections in ambient air. Water Gremlin was not the cause of the TCE detections in air.			
478	Figures 1 and 2		No edits to Figures 1 and 2.	No	Yes

Exhibit 3



Preliminary Draft Permit
Air Individual Permit
Major Amendment
12300341-101

Permittee: Okabe Holding USA, Inc.
Co-permittee name: Water Gremlin Company
Facility name: Water Gremlin Company
4400 Otter Lake Rd
White Bear Township, MN 55110-3757
Ramsey County

Operating permit issuance date: July 20, 2000

Expiration date: [Five years from issue date]

* All Title I Conditions do not expire

Major Amendment: [TBD]

Permit characteristics: State; Limits to avoid Part 70/ Limits to avoid NSR; Limits to avoid NSR

The emission units, control equipment and emission stacks at the stationary source authorized in this permit amendment are as described in the submittals listed in the Permit Applications Table.

This permit amendment supersedes Air Emission Permit No. 12300341-004 and authorizes the Permittee to modify and operate the stationary source at the address listed above unless otherwise noted in the permit. The Permittee must comply with all the conditions of the permit, Air Emission Permit No. 12300341-101. At the time of permit issuance, the following agreements and orders are enforceable until the Minnesota Pollution Control Agency terminates these:

- March 1, 2019, Stipulation Agreement; and
- January 17, 2020, Administrative Order.

Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Unless otherwise indicated, all the Minnesota rules cited as the origin of the permit terms are incorporated into the SIP under 40 CFR § 52.1220 and as such are enforceable by U.S. Environmental Protection Agency (EPA) Administrator or citizens under the Clean Air Act.

Signature:

This document has been electronically signed.

for Steven S. Pak, P.E., Manager
Air Quality Permits Section
Industrial Division

for the Minnesota Pollution Control Agency

Commented [A1]: Minn. R. 7007.0500, subp. 2(A)(2)-(3), requires a permit include all owners of the stationary source and real property. Okabe Holding USA, Inc. does not own the stationary source and real property; Water Gremlin Company is the sole owner of those assets and the only entity listed on the application, the administrative order and stipulation agreement. Okabe Holding USA, Inc. should be removed from the permit, and Water Gremlin Company should be listed as Permittee.

Table of Contents

	Page
1. Permit applications table.....	3
2. Where to send submittals	4
3. Facility description	5
4. Summary of subject items.....	8
5. Limits and other requirements.....	22
6. Submittal/action requirements	326
7. Appendices.....	397
Appendix A. Insignificant activities and general applicable requirements	397
Appendix B. Maximum material content, emissions calculations, and analytical methods for coating operations	398
Appendix C. NAAQS modeling and AERA parameters.....	402
Appendix D. Emission factors for lead processing units.....	423
Appendix E. Performance test operating conditions and recordkeeping.....	425
Appendix G. General public preclusion plan.....	512
Appendix H. Minimum requirements for a revised VOC and TO-15 ambient air monitoring plan	515
Appendix I. Equipment inventory at the time of permit issuance.....	524
Appendix J. Coating usage tracking protocol.....	529
Appendix K. 40 CFR pt. 60, subp. IIII	531
Appendix L. 40 CFR pt. 60, subp. A – General Provisions	562

Permit issued: [month day, year]
Permit expires: [month day, year]

12300341-101
Page 3 of 672

1. Permit applications table

Permit applications:

Title description	Application receipt date	Action number
Administrative Amendment	06/30/2016	12300341-101
Major Amendment	10/23/2018	
Major Amendment	02/08/2019 (supplemental information received 8/30/2019, 2/21/2020, 4/21/2020, 11/19/2021, 12/6/2021, 1/10/2022, 8/24/2022, and final application dated 07/01/2022)	

Permit issued: [month day, year]
Permit expires: [month day, year]

12300341-101
Page 4 of 672

2. Where to send submittals

Send submittals that are required to be submitted to the EPA regional office to:

Chief Air Enforcement
Air and Radiation Branch
EPA Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by Minn. R. 7007.0100 to 7007.1850 must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Other submittals shall be certified as appropriate if certification is required by an applicable rule or permit condition.

Send submittals that are required by the Acid Rain Program to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue NW (6204N)
Washington, D.C. 20460

Send any application for a permit or permit amendment to:

Fiscal Services – 6th Floor
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Also, where required by an applicable rule or permit condition, send to the Permit Document Coordinator notices of:

- a. Accumulated insignificant activities
- b. Installation of control equipment
- c. Replacement of an emissions unit, and
- d. Changes that contravene a permit term

Unless another person is identified in the applicable Table, send all other submittals to:

AQ Compliance Tracking Coordinator
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Or Email a signed and scanned PDF copy to:
submitstacktest.pca@state.mn.us
(for submittals related to stack testing)
AQRoutineReport.PCA@state.mn.us
(for other compliance submittals)
(See complete email instructions in "Routine Air Report Instructions Letter" at <http://www.pca.state.mn.us/nwqh472>.)

Permit issued: [month day, year]
Permit expires: [month day, year]

12300341-101
Page 5 of 672

3. Facility description

The Water Gremlin Co (Facility) is located at 4400 Otter Lake Rd, White Bear Township, Ramsey County, Minnesota.

The facility manufactures lead metal products fabricated using refined material purchased from recycling facilities. The facility produces battery terminal posts for automotive, marine, and other consumer, commercial, governmental, and military vehicles and equipment. Other fabricated products include lead and tin sinker weights for recreational fishing applications, and lead components for governmental, commercial, recreational, and personal munitions. Following fabrication, some battery terminal posts are treated with a coating to protect the products from corrosion or to improve fit with other components. The air emission units at the facility include battery terminal post coating units (coaters), die casting units, lead and tin melt pots, coining units, abrasive blasting units, makeup air units, space heaters, and an emergency generator. The major pollutants of concern include volatile organic compounds (VOC), trans-1,2-dichloroethylene (t-DCE), lead, particulate matter (PM), particulate matter with aerodynamic diameter less than 10 micrometers (PM₁₀), particulate matter with aerodynamic diameter less than 2.5 micrometers (PM_{2.5}), and nitrogen oxides (NO_x). Other pollutants emitted from facility processes include sulfur dioxide (SO₂), carbon monoxide (CO), and hazardous air pollutants (HAPs) associated with fossil fuel combustion from the compression ignition emergency generator, makeup air units, lead and tin melt pots, and space heaters.

Pollution control equipment operated at the facility includes Nederman filters and low-efficiency electrostatic precipitators (ESP), connected in-series, which capture lead and PM/PM₁₀/PM_{2.5} emissions from lead and tin processing units. Nederman filters are also used on select coaters to control PM/PM₁₀/PM_{2.5} emissions due to spray coating application. HEPA filters are used to control emissions from abrasive blasting units. The facility operates a sub-slab depressurization system (SSDS) and soil vapor extraction (SVE) system with two granular activated carbon (GAC) canisters to collect and control VOC and HAP emissions from beneath the facility's concrete floor.

Commented [A2]: Water Gremlin requests the name brand not be written in to the permit and instead be allowed to replace what are currently Nederman filters with equivalent oil/mist separators if needed.

Description of permit additions

The permit acknowledges that, at the time of permit issuance, there are other enforceable documents regulating air emissions from the facility and that these enforceable documents are not terminated with the issuance of Permit No. 12300341-101. The other enforceable documents are the Stipulation Agreement (Agreement) executed March 1, 2019, and Administrative Order (Order), signed January 17, 2020.

Addition of emission units previously identified as insignificant activities. Several emission units at the facility were previously identified as insignificant activities under Minn. R. 7007.1300, subp. 3(F) (formerly Minn. R. 7007.1300, subp 3(I)), including die casting units, natural gas-fired heating equipment, distillation equipment, and cooling towers. As a result of Title V modeling, the facility accepted emission limits to demonstrate compliance with applicable National Ambient Air Quality Standards (NAAQS). Since these units were modeled explicitly, they have been added to the subject item inventory as emission units.

Addition of limits on t-DCE, PM₁₀, PM_{2.5}, NO₂, and lead emissions. The technical review of permit applications required an air emissions risk analysis (AERA) and dispersion model to determine the health risks of t-DCE and lead emissions from the facility. Through the permitting process, the facility was required to conduct Title V modeling to determine modeled compliance with applicable PM₁₀, PM_{2.5}, NO₂, and lead NAAQS. The results of these analyses required emissions and operation limits such that the facility remains in compliance with all applicable PM₁₀, PM_{2.5}, NO₂, and lead NAAQS, and health-based guidance values for t-DCE and lead.

Addition of continuous emissions monitoring system (CEMS) in the battery terminal post coater stack. The permit includes a VOC CEMS in the battery terminal post coater stack (STRU 73). This was required temporarily by the Administrative Order to monitor the occurrence of emissions from the coaters and estimate the amount of t-DCE (as VOC) leaving the coaters to verify compliance with solvent use limits required by the Stipulation Agreement.

Permit issued: [month day, year]
Permit expires: [month day, year]

12300341-101
Page 6 of 672

Permanent operation and maintenance of a VOC CEMS, recordkeeping of CEM results, and CEM correlation validation is required by the permit as an audit to the main compliance determination method of daily material usage recordkeeping. Other audit requirements include quarterly VOC solvent purchase and inventory audits, and reporting.

Addition of solvent vapor remediation system. The permit includes the addition of the sub-slab depressurization and solvent vapor extraction system with associated GAC canister control equipment to capture existing (and future) sub-slab solvent vapor contamination identified during the remedial investigation. The permit includes operation, monitoring, recordkeeping, and reporting requirements.

Addition of ambient monitors for VOCs with speciation for t-DCE and other VOCs. Operation of approved VOC ambient air monitors required by the Agreement are to be operated for at least two years following permit issuance to ensure t-DCE emissions remain below Minnesota Department of Health's (MDH) risk assessment advice (RAA). Conditions that must be met to discontinue VOC monitoring are also specified. The facility is responsible for managing each monitor's operation, maintenance, recordkeeping, and reporting of results as described later in this permit.

Recurring testing to verify coating rooms are total enclosures. The discovery of solvent vapor intrusion into sub-slab vapor space indicates the need to enhance the permit requirements to ensure that the coating rooms are being maintained as total enclosures and that there are no leaks through the floors. Therefore, to ensure all VOC solvent vapors from coating operations are being vented to the common stack (STRU 73), the permit requires a minimum negative pressure differential be maintained and continuous monitoring of coating room pressure and alarms (audible and visual) that alert when coating room pressure is above the set point established under the permit. The permit also requires daily inspection of enclosure integrity, annual testing of the enclosure to ensure it meets the definition described above following EPA Method 204 in Appendix M of 40 CFR Part 51, and maintenance of coating room floor sealant to avoid further sub-slab contamination due to vapor intrusion or spills.

Solvent authorized for use in coating operations. Permit No. 12300341-003 authorized the use of trichloroethylene (TCE), a VOC and HAP, as an allowable solvent in coating operations. Water Gremlin has eliminated the use of TCE in at the facility and is using t-DCE as the TCE replacement. This permit prohibits the use of TCE in any facility operations, and changes the allowable VOC-based coating solvent formula to less than or equal to 90 percent by weight VOC. All the VOC is conservatively assumed to be t-DCE, and the balance of the material is comprised of greater than or equal to 10 percent by weight of non-HAP, non-VOC constituents. Changes to any solvent formulation that increases the amount of any regulated pollutants or air toxics for which there are health-based guidance values, or adds new regulated pollutants, may require a major amendment described under Minn. R. 7007.1500.

Incorporation of minor amendment authorizing operation of EQUI 82 and authorization to install EQUI 219, 220, and additional UV coaters. Air Quality Permit No. 12300341-004 authorized construction and operation of a battery terminal post coater (EQUI 82) utilizing a non-t-DCE, very low VOC, UV-cured coating technology. Since the refined dispersion model was in-progress at the time, the permit amendment limited PM/PM₁₀/PM_{2.5} emissions to less than or equal to each pollutant's significant impact level (SIL) established by MPCA dispersion modeling guidance to ensure protection of air quality. The minor amendment has been incorporated into this permit and is subject to the PM₁₀ and PM_{2.5} limits at STRU 73 established by the refined dispersion model. Despite the effective increase in allowable emissions from EQUI 82 compared to what was authorized by the minor amendment, the refined model demonstrates compliance with applicable PM₁₀ and PM_{2.5} NAAQS. The refined model includes revised emission limits for EQUI 82 as well as allowable emissions for future UV coaters.

Permit issued: [month day, year]
Permit expires: [month day, year]

12300341-101
Page 7 of 672

Authorization to convert VOC coaters to UV or water-based coating, and conversion to other application methods. Existing VOC coaters were converted to use a water-based coating or UV coating application to further reduce VOC emissions. These were added to the permit and their emissions regulated for VOC, PM₁₀, and PM_{2.5}. UV and water-based coaters that use spray application methods must be operated in coating rooms functioning as total enclosures. The permit allows for the conversion of VOC coaters to use water-based coating or UV coater application, and conversion of water-based coaters to UV coaters, or vice versa. The permit allows conversion of dip/drip water-based coaters to water-based spray application methods, and vice versa. The permit prohibits the conversion of water-based or UV coaters to VOC coaters, the addition of more VOC coaters, or the increase in capacity of existing VOC coaters without a major amendment.

Description of permit modifications

Modification of VOC emissions calculation procedure and addition of t-DCE emissions calculation procedure. The current permit authorizes calculation of VOC emissions using solvent purchase and inventory records. Due to concerns around the recordkeeping and compliance verification frequency of the current method, and to increase the accuracy of emissions accounting, the permit requires daily recordkeeping of several parameters related to solvent use, including VOC coating, water-based coating, and UV coating usage, VOC solvent recovered from the distiller, VOC waste, and calculating the VOC 12-month rolling sum and t-DCE 365-day rolling sum, in addition to VOC solvent purchase and inventory records. Uncaptured VOC/t-DCE emissions from the chemical storage room will be included in daily calculations based on measured indoor air concentrations as described later in this permit.

Description of permit deletions

Dismantlement and removal of Fluidized Bed Solvent Recovery (carbon adsorption) unit. The facility had a carbon adsorption unit, originally installed in 2002, to control and recover TCE emissions from coating operations, which were then reconditioned and reused in the coating process. A larger carbon adsorption unit was installed in December 2018 to solve efficiency issues identified in the Environmental Audit. As a result of enforcement of the Agreement, TCE use was banned from the facility and an attempt was made to retrofit the new carbon adsorption unit to recover t-DCE. The initial performance test revealed a control efficiency far less than warranted by the manufacturer due to the unit being originally designed for TCE recovery. After numerous attempts to obtain a consistent control efficiency greater than or equal to 70 percent as proposed in the application, the facility abandoned the adsorption unit as a feasible control device in its operations; therefore, the carbon adsorption unit has been removed from the permit. The facility will demonstrate compliance with VOC and t-DCE emission limits on coating operation through limiting solvent usage in coating operations.

Removal of VOC and HAP emission limit precap. Permit No. 12300341-003 allows for installation and operation of additional VOC battery terminal post coaters without prior authorization from the MPCA. This permit condition has been removed and the addition of new VOC battery post coaters or the replacement of existing VOC coaters with larger capacity VOC coaters will not be authorized by this permit. The permit pre-authorizes addition of water-based (very low VOC content) and UV-cured coating units.

Permit issued: [month day, year]
 Permit expires: [month day, year]

12300341-101
 Page 8 of 672

4. Summary of subject items

SI ID: Description	Relationship type	Related SI ID: Description
TFAC 1: Water Gremlin Co		
ACTV 3: All IAs		
COMG 1: VOC and 1,2 (trans) Dichloroethylene Limits and VOC Coater, Water-Based Coater, UV Coater, and Solvent Distillation Operation Requirements.	has members	EQUI 82, EQUI 84, EQUI 85, EQUI 87, EQUI 88, EQUI 89, EQUI 92, EQUI 93, EQUI 94, EQUI 95, EQUI 97, EQUI 98, EQUI 99, EQUI 100, EQUI 116, EQUI 117, EQUI 166, EQUI 172, EQUI 173, EQUI 174, EQUI 176, EQUI 233, EQUI 240
COMG 2: PM10 and PM2.5: Limits and Compliance Requirements for Ultraviolet (UV) Battery Terminal Post Coaters	has members	EQUI 82, EQUI 84, EQUI 117, EQUI 219, EQUI 220, EQUI 240
COMG 4: PM10 and PM2.5: Limits and Compliance Requirements for VOC Spray Battery Terminal Post Coaters	has members	EQUI 88, EQUI 95
COMG 5: Permanent Total Enclosure Requirements: Coating Rooms	has members	EQUI 82, EQUI 84, EQUI 85, EQUI 87, EQUI 88, EQUI 89, EQUI 92, EQUI 93, EQUI 94, EQUI 95, EQUI 97, EQUI 98, EQUI 99, EQUI 100, EQUI 166, EQUI 168, EQUI 169, EQUI 170, EQUI

SI ID: Description	Relationship type	Related SI ID: Description
		171, EQUI 173, EQUI 219, EQUI 220
COMG 6: Indirect Heating Equipment Rule Requirements	has members	EQUI 101, EQUI 102, EQUI 103, EQUI 104
COMG 7: Industrial Process Equipment Rule Requirements	has members	EQUI 82, EQUI 84, EQUI 88, EQUI 95, EQUI 113, EQUI 114, EQUI 115, EQUI 117, EQUI 121, EQUI 122, EQUI 123, EQUI 124, EQUI 125, EQUI 126, EQUI 127, EQUI 128, EQUI 129, EQUI 130, EQUI 131, EQUI 132, EQUI 133, EQUI 134, EQUI 135, EQUI 136, EQUI 137, EQUI 138, EQUI 139, EQUI 140, EQUI 141, EQUI 142, EQUI 143, EQUI 146, EQUI 147, EQUI 149, EQUI 150, EQUI 152, EQUI 153, EQUI 154, EQUI 155, EQUI 156, EQUI 157, EQUI 158, EQUI

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 9 of 672

SI ID: Description	Relationship type	Related SI ID: Description
		160, EQUI 205, EQUI 206, EQUI 221, EQUI 222, EQUI 223, EQUI 224, EQUI 225, EQUI 226, EQUI 227, EQUI 228, EQUI 229, EQUI 230, EQUI 231, EQUI 232, EQUI 240
COMG 8: PM10 and PM2.5: Limits and Compliance Requirements for Water-Based Spray Battery Terminal Post Coaters	has members	EQUI 88, EQUI 95
COMG 9: Sub-Slab Vapor Mitigation System: Operation Requirements	has members	EQUI 167, TREA 50, TREA 51
COMG 10: NOx: North Building Space Heating Capacity and Operation Limits	has members	EQUI 177, EQUI 178, EQUI 179, EQUI 180, EQUI 181, EQUI 182, EQUI 183, EQUI 184, EQUI 185, EQUI 186, EQUI 187, EQUI 188, EQUI 189, EQUI 190, EQUI 191, EQUI 192, EQUI 193, EQUI 194, EQUI 195, EQUI 196, EQUI 197, EQUI 198, EQUI 199, EQUI 200, EQUI 201,

SI ID: Description	Relationship type	Related SI ID: Description
		EQUI 202, EQUI 203, EQUI 204, EQUI 205, EQUI 206, EQUI 207
COMG 11: Nederman Filter and Smog Hog Control Equipment Train - Melt Pots	has members	TREA 1, TREA 60
COMG 12: Nederman Filter and Smog Hog Control Equipment Train - Die Casting	has members	TREA 25, TREA 26, TREA 27, TREA 30, TREA 33, TREA 34, TREA 35, TREA 36, TREA 39, TREA 40, TREA 41, TREA 42, TREA 43, TREA 61, TREA 62, TREA 63, TREA 64, TREA 65, TREA 66, TREA 67, TREA 68, TREA 69, TREA 70, TREA 71, TREA 72, TREA 73, TREA 74, TREA 75, TREA 76, TREA 77, TREA 78, TREA 79
COMG 13: Direct Heating Equipment Rule Requirements	has members	EQUI 106, EQUI 107, EQUI 108, EQUI 109, EQUI 110, EQUI 111, EQUI 112, EQUI 177, EQUI 178, EQUI 179, EQUI 180, EQUI 181, EQUI 182, EQUI 183, EQUI 184, EQUI 185, EQUI 186, EQUI 187, EQUI 188,

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 10 of 672

SI ID: Description	Relationship type	Related SI ID: Description
		EQUI 189, EQUI 190, EQUI 191, EQUI 192, EQUI 193, EQUI 194, EQUI 195, EQUI 196, EQUI 197, EQUI 198, EQUI 199, EQUI 200, EQUI 201, EQUI 202, EQUI 203, EQUI 204, EQUI 205, EQUI 206, EQUI 207, EQUI 208, EQUI 209, EQUI 210, EQUI 211, EQUI 212, EQUI 213, EQUI 214, EQUI 215, EQUI 216, EQUI 217, EQUI 218, EQUI 222
COMG 14: Nederman Filters - Spray Coaters	has members	TREA 55, TREA 56, TREA 57, TREA 58, TREA 59
COMG 15: NOx: South Building Space Heating Capacity and Operation Limits	has members	EQUI 208, EQUI 209, EQUI 210, EQUI 211, EQUI 212, EQUI 213, EQUI 214, EQUI 215, EQUI 216, EQUI 217, EQUI 218
COMG 16: Die Casting Annual Throughput and Lead Emission Limits	has members	EQUI 121, EQUI 122, EQUI 123, EQUI 124, EQUI 125,

SI ID: Description	Relationship type	Related SI ID: Description
		EQUI 126, EQUI 127, EQUI 128, EQUI 129, EQUI 130, EQUI 131, EQUI 132, EQUI 133, EQUI 134, EQUI 135, EQUI 136, EQUI 137, EQUI 138, EQUI 139, EQUI 140, EQUI 141, EQUI 142, EQUI 143, EQUI 146, EQUI 147, EQUI 149, EQUI 150, EQUI 152, EQUI 153, EQUI 154, EQUI 155, EQUI 156, EQUI 157, EQUI 158
EQUI 82: Battery Terminal Post Coater 6	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 84: Battery Terminal Post Coater 9	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 84: Battery Terminal Post Coater 9	is controlled by	TREA 55: Nederman Filter - EQUI 84
EQUI 85: Battery Terminal Post Coater 10	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 87: Battery Terminal Post Coater 12	sends to	STRU 73: Battery Terminal Post Coater Stack

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 11 of 672

SI ID: Description	Relationship type	Related SI ID: Description
EQUI 88: Battery Terminal Post Coater 15	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 88: Battery Terminal Post Coater 15	is controlled by	TREA 56: Nederman Filter - EQUI 88
EQUI 89: Battery Terminal Post Coater 17	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 92: Battery Terminal Post Coater 20	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 93: Battery Terminal Post Coater 21	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 94: Battery Terminal Post Coater 22	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 95: Battery Terminal Post Coater 23	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 95: Battery Terminal Post Coater 23	is controlled by	TREA 57: Nederman Filter - EQUI 95
EQUI 97: Battery Terminal Post Coater 25	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 98: Battery Terminal Post Coater 26	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 99: Battery Terminal Post Coater 27	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 100: Battery Terminal Post Coater 28	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 101: CF Scrap Re-Melt Pot	sends to	STRU 1: Smog Hog #15 Stack

SI ID: Description	Relationship type	Related SI ID: Description
EQUI 101: CF Scrap Re-Melt Pot	is controlled by	TREA 1: Smog Hog #15
EQUI 101: CF Scrap Re-Melt Pot	is controlled by	TREA 60: Nederman Filter 15N - STRU 1
EQUI 102: Small Re-Melt Pot	sends to	STRU 1: Smog Hog #15 Stack
EQUI 102: Small Re-Melt Pot	is controlled by	TREA 1: Smog Hog #15
EQUI 102: Small Re-Melt Pot	is controlled by	TREA 60: Nederman Filter 15N - STRU 1
EQUI 103: Doe Run Melt Pot	sends to	STRU 1: Smog Hog #15 Stack
EQUI 103: Doe Run Melt Pot	is controlled by	TREA 1: Smog Hog #15
EQUI 103: Doe Run Melt Pot	is controlled by	TREA 60: Nederman Filter 15N - STRU 1
EQUI 104: CF Re-Melt Pot	sends to	STRU 1: Smog Hog #15 Stack
EQUI 104: CF Re-Melt Pot	is controlled by	TREA 1: Smog Hog #15
EQUI 104: CF Re-Melt Pot	is controlled by	TREA 60: Nederman Filter 15N - STRU 1
EQUI 106: Make-up Air Unit 1N	sends to	STRU 43: Exhaust fan #7
EQUI 106: Make-up Air Unit 1N	sends to	STRU 47: Exhaust fan #4
EQUI 106: Make-up Air Unit 1N	sends to	STRU 48: Exhaust fan #5
EQUI 106: Make-up Air Unit 1N	sends to	STRU 49: Exhaust fan #6
EQUI 107: Make-up Air Unit 2N	sends to	STRU 44: Exhaust fan #1
EQUI 107: Make-up Air Unit 2N	sends to	STRU 45: Exhaust fan #2

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 12 of 672

SI ID: Description	Relationship type	Related SI ID: Description
EQUI 107: Make-up Air Unit 2N	sends to	STRU 46: Exhaust fan #3
EQUI 108: Make-up Air Unit 3N	sends to	STRU 44: Exhaust fan #1
EQUI 108: Make-up Air Unit 3N	sends to	STRU 45: Exhaust fan #2
EQUI 108: Make-up Air Unit 3N	sends to	STRU 46: Exhaust fan #3
EQUI 108: Make-up Air Unit 3N	sends to	STRU 47: Exhaust fan #4
EQUI 109: Make-up Air Unit 5N	sends to	STRU 43: Exhaust fan #7
EQUI 109: Make-up Air Unit 5N	sends to	STRU 48: Exhaust fan #5
EQUI 109: Make-up Air Unit 5N	sends to	STRU 49: Exhaust fan #6
EQUI 109: Make-up Air Unit 5N	sends to	STRU 50: Exhaust fan #8
EQUI 110: Make-up Air Unit 6N	sends to	STRU 51: Exhaust fan #9
EQUI 110: Make-up Air Unit 6N	sends to	STRU 52: Exhaust fan #10
EQUI 110: Make-up Air Unit 6N	sends to	STRU 53: Exhaust fan #11
EQUI 110: Make-up Air Unit 6N	sends to	STRU 56: Exhaust fan #14
EQUI 111: Make-up Air Unit 9N	sends to	STRU 44: Exhaust fan #1
EQUI 111: Make-up Air Unit 9N	sends to	STRU 45: Exhaust fan #2
EQUI 111: Make-up Air Unit 9N	sends to	STRU 46: Exhaust fan #3

SI ID: Description	Relationship type	Related SI ID: Description
EQUI 112: Make-up Air Unit 11N	sends to	STRU 51: Exhaust fan #9
EQUI 112: Make-up Air Unit 11N	sends to	STRU 52: Exhaust fan #10
EQUI 112: Make-up Air Unit 11N	sends to	STRU 53: Exhaust fan #11
EQUI 112: Make-up Air Unit 11N	sends to	STRU 56: Exhaust fan #14
EQUI 113: Tool room 1 Abrasive Blasting	sends to	STRU 57: Shipping vent 20
EQUI 113: Tool room 1 Abrasive Blasting	is controlled by	TREA 52: HEPA Filter - Tool Room 1 Abrasive Blasting
EQUI 114: Tool room 2 Abrasive Blasting	sends to	STRU 57: Shipping vent 20
EQUI 114: Tool room 2 Abrasive Blasting	is controlled by	TREA 53: HEPA Filter - Tool Room 2 Abrasive Blasting
EQUI 115: DC Abrasive Blasting	sends to	STRU 43: Exhaust fan #7
EQUI 115: DC Abrasive Blasting	sends to	STRU 50: Exhaust fan #8
EQUI 115: DC Abrasive Blasting	is controlled by	TREA 54: HEPA Filter - DC Abrasive Blasting
EQUI 116: Battery Terminal Post Coater 30	sends to	STRU 50: Exhaust fan #8
EQUI 117: South Building R&D Coater	sends to	STRU 35: Smog Hog #21 Stack
EQUI 120: Emergency Generator Engine	sends to	STRU 4: Emergency Generator Engine Stack

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 13 of 672

SI ID: Description	Relationship type	Related SI ID: Description
EQUI 121: Die Cast (DC09)	sends to	STRU 15: Smog Hog #1 Stack
EQUI 121: Die Cast (DC09)	sends to	STRU 48: Exhaust fan #5
EQUI 121: Die Cast (DC09)	is controlled by	TREA 25: Smog Hog #1
EQUI 121: Die Cast (DC09)	is controlled by	TREA 61: Nederman Filter 1N - STRU 15
EQUI 122: Die Cast (DC12)	sends to	STRU 15: Smog Hog #1 Stack
EQUI 122: Die Cast (DC12)	sends to	STRU 48: Exhaust fan #5
EQUI 122: Die Cast (DC12)	is controlled by	TREA 25: Smog Hog #1
EQUI 122: Die Cast (DC12)	is controlled by	TREA 61: Nederman Filter 1N - STRU 15
EQUI 123: Die Cast (DC33)	sends to	STRU 15: Smog Hog #1 Stack
EQUI 123: Die Cast (DC33)	sends to	STRU 49: Exhaust fan #6
EQUI 123: Die Cast (DC33)	is controlled by	TREA 25: Smog Hog #1
EQUI 123: Die Cast (DC33)	is controlled by	TREA 61: Nederman Filter 1N - STRU 15
EQUI 124: Die Cast (DC14)	sends to	STRU 16: Smog Hog #2 Stack
EQUI 124: Die Cast (DC14)	sends to	STRU 43: Exhaust fan #7
EQUI 124: Die Cast (DC14)	is controlled by	TREA 26: Smog Hog #2
EQUI 124: Die Cast (DC14)	is controlled by	TREA 63: Nederman Filter 2N2 - STRU 16

SI ID: Description	Relationship type	Related SI ID: Description
EQUI 125: Die Cast (DC15)	sends to	STRU 16: Smog Hog #2 Stack
EQUI 125: Die Cast (DC15)	sends to	STRU 50: Exhaust fan #8
EQUI 125: Die Cast (DC15)	is controlled by	TREA 26: Smog Hog #2
EQUI 125: Die Cast (DC15)	is controlled by	TREA 63: Nederman Filter 2N2 - STRU 16
EQUI 126: Die Cast (DC21)	sends to	STRU 16: Smog Hog #2 Stack
EQUI 126: Die Cast (DC21)	sends to	STRU 50: Exhaust fan #8
EQUI 126: Die Cast (DC21)	is controlled by	TREA 26: Smog Hog #2
EQUI 126: Die Cast (DC21)	is controlled by	TREA 62: Nederman Filter 2N1 - STRU 16
EQUI 127: Die Cast (DC08)	sends to	STRU 17: Smog Hog #3 Stack
EQUI 127: Die Cast (DC08)	sends to	STRU 47: Exhaust fan #4
EQUI 127: Die Cast (DC08)	is controlled by	TREA 27: Smog Hog #3
EQUI 127: Die Cast (DC08)	is controlled by	TREA 64: Nederman Filter 3N - STRU 17
EQUI 128: Die Cast (DC10)	sends to	STRU 17: Smog Hog #3 Stack
EQUI 128: Die Cast (DC10)	sends to	STRU 47: Exhaust fan #4
EQUI 128: Die Cast (DC10)	is controlled by	TREA 27: Smog Hog #3
EQUI 128: Die Cast (DC10)	is controlled by	TREA 64: Nederman Filter 3N - STRU 17

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 14 of 672

SI ID: Description	Relationship type	Related SI ID: Description
EQUI 129: Die Cast (DC17)	sends to	STRU 17: Smog Hog #3 Stack
EQUI 129: Die Cast (DC17)	sends to	STRU 47: Exhaust fan #4
EQUI 129: Die Cast (DC17)	is controlled by	TREA 27: Smog Hog #3
EQUI 129: Die Cast (DC17)	is controlled by	TREA 64: Nederman Filter 3N - STRU 17
EQUI 130: Die Cast (DC18)	sends to	STRU 44: Exhaust fan #1
EQUI 130: Die Cast (DC18)	sends to	STRU 74: Smog Hog #5 Stack
EQUI 130: Die Cast (DC18)	is controlled by	TREA 65: Nederman Device 5N - STRU 74
EQUI 130: Die Cast (DC18)	is controlled by	TREA 78: Smog Hog #5
EQUI 131: Die Cast (DC36)	sends to	STRU 44: Exhaust fan #1
EQUI 131: Die Cast (DC36)	sends to	STRU 74: Smog Hog #5 Stack
EQUI 131: Die Cast (DC36)	is controlled by	TREA 65: Nederman Device 5N - STRU 74
EQUI 131: Die Cast (DC36)	is controlled by	TREA 78: Smog Hog #5
EQUI 132: Die Cast (DC37)	sends to	STRU 20: Smog Hog #6 Stack
EQUI 132: Die Cast (DC37)	sends to	STRU 44: Exhaust fan #1
EQUI 132: Die Cast (DC37)	is controlled by	TREA 30: Smog Hog #6
EQUI 132: Die Cast (DC37)	is controlled by	TREA 66: Nederman Filter 6N - STRU 20

SI ID: Description	Relationship type	Related SI ID: Description
EQUI 133: Die Cast (DC25)	sends to	STRU 20: Smog Hog #6 Stack
EQUI 133: Die Cast (DC25)	sends to	STRU 44: Exhaust fan #1
EQUI 133: Die Cast (DC25)	is controlled by	TREA 30: Smog Hog #6
EQUI 133: Die Cast (DC25)	is controlled by	TREA 66: Nederman Filter 6N - STRU 20
EQUI 134: Die Cast (DC22)	sends to	STRU 44: Exhaust fan #1
EQUI 134: Die Cast (DC22)	sends to	STRU 75: Smog Hog #8 Stack
EQUI 134: Die Cast (DC22)	is controlled by	TREA 67: Nederman Device 8N - STRU 75
EQUI 134: Die Cast (DC22)	is controlled by	TREA 79: Smog-Hog #8
EQUI 135: Die Cast (DC35)	sends to	STRU 44: Exhaust fan #1
EQUI 135: Die Cast (DC35)	sends to	STRU 75: Smog Hog #8 Stack
EQUI 135: Die Cast (DC35)	is controlled by	TREA 67: Nederman Device 8N - STRU 75
EQUI 135: Die Cast (DC35)	is controlled by	TREA 79: Smog-Hog #8
EQUI 136: Die Cast (DC32)	sends to	STRU 23: Smog Hog #9 Stack
EQUI 136: Die Cast (DC32)	sends to	STRU 44: Exhaust fan #1
EQUI 136: Die Cast (DC32)	is controlled by	TREA 33: Smog Hog #9
EQUI 136: Die Cast (DC32)	is controlled by	TREA 68: Nederman Filter 9N - STRU 23

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 15 of 672

SI ID: Description	Relationship type	Related SI ID: Description
EQUI 137: Die Cast (DC26)	sends to	STRU 24: Smog Hog #10 Stack
EQUI 137: Die Cast (DC26)	sends to	STRU 45: Exhaust fan #2
EQUI 137: Die Cast (DC26)	is controlled by	TREA 34: Smog Hog #10
EQUI 137: Die Cast (DC26)	is controlled by	TREA 69: Nederman Filter 10N - STRU 24
EQUI 138: Die Cast (DC27)	sends to	STRU 24: Smog Hog #10 Stack
EQUI 138: Die Cast (DC27)	sends to	STRU 45: Exhaust fan #2
EQUI 138: Die Cast (DC27)	is controlled by	TREA 34: Smog Hog #10
EQUI 138: Die Cast (DC27)	is controlled by	TREA 69: Nederman Filter 10N - STRU 24
EQUI 139: Die Cast (DC16)	sends to	STRU 25: Smog Hog #11 Stack
EQUI 139: Die Cast (DC16)	sends to	STRU 45: Exhaust fan #2
EQUI 139: Die Cast (DC16)	is controlled by	TREA 35: Smog Hog #11
EQUI 139: Die Cast (DC16)	is controlled by	TREA 70: Nederman Filter 11N - STRU 25
EQUI 140: Die Cast (DC28)	sends to	STRU 25: Smog Hog #11 Stack
EQUI 140: Die Cast (DC28)	sends to	STRU 45: Exhaust fan #2
EQUI 140: Die Cast (DC28)	is controlled by	TREA 35: Smog Hog #11
EQUI 140: Die Cast (DC28)	is controlled by	TREA 70: Nederman Filter 11N - STRU 25

SI ID: Description	Relationship type	Related SI ID: Description
EQUI 141: Die Cast (DC29)	sends to	STRU 26: Smog Hog #12 Stack
EQUI 141: Die Cast (DC29)	sends to	STRU 45: Exhaust fan #2
EQUI 141: Die Cast (DC29)	is controlled by	TREA 36: Smog Hog #12
EQUI 141: Die Cast (DC29)	is controlled by	TREA 71: Nederman Filter 12N1 - STRU 26
EQUI 142: Die Cast (DC19)	sends to	STRU 26: Smog Hog #12 Stack
EQUI 142: Die Cast (DC19)	sends to	STRU 46: Exhaust fan #3
EQUI 142: Die Cast (DC19)	is controlled by	TREA 36: Smog Hog #12
EQUI 142: Die Cast (DC19)	is controlled by	TREA 72: Nederman Filter 12N2 - STRU 26
EQUI 143: Die Cast (DC34)	sends to	STRU 26: Smog Hog #12 Stack
EQUI 143: Die Cast (DC34)	sends to	STRU 46: Exhaust fan #3
EQUI 143: Die Cast (DC34)	is controlled by	TREA 36: Smog Hog #12
EQUI 143: Die Cast (DC34)	is controlled by	TREA 71: Nederman Filter 12N1 - STRU 26
EQUI 146: Die Cast (DC42)	sends to	STRU 30: Smog Hog #16 Stack
EQUI 146: Die Cast (DC42)	sends to	STRU 53: Exhaust fan #11
EQUI 146: Die Cast (DC42)	is controlled by	TREA 39: Smog Hog #16
EQUI 146: Die Cast (DC42)	is controlled by	TREA 73: Nederman Filter 16N - STRU 30

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 16 of 672

SI ID: Description	Relationship type	Related SI ID: Description
EQUI 147: Die Cast (DC38)	sends to	STRU 31: Smog Hog #17 Stack
EQUI 147: Die Cast (DC38)	sends to	STRU 52: Exhaust fan #10
EQUI 147: Die Cast (DC38)	is controlled by	TREA 40: Smog Hog #17
EQUI 147: Die Cast (DC38)	is controlled by	TREA 74: Nederman Filter 17N - STRU 31
EQUI 149: Die Cast (DC40)	sends to	STRU 32: Smog Hog #18 Stack
EQUI 149: Die Cast (DC40)	sends to	STRU 51: Exhaust fan #9
EQUI 149: Die Cast (DC40)	is controlled by	TREA 41: Smog Hog #18
EQUI 149: Die Cast (DC40)	is controlled by	TREA 75: Nederman Filter 18N - STRU 32
EQUI 150: Die Cast (DC48)	sends to	STRU 32: Smog Hog #18 Stack
EQUI 150: Die Cast (DC48)	sends to	STRU 53: Exhaust fan #11
EQUI 150: Die Cast (DC48)	is controlled by	TREA 41: Smog Hog #18
EQUI 150: Die Cast (DC48)	is controlled by	TREA 75: Nederman Filter 18N - STRU 32
EQUI 152: Die Cast (DC41)	sends to	STRU 33: Smog Hog #19 Stack
EQUI 152: Die Cast (DC41)	sends to	STRU 51: Exhaust fan #9
EQUI 152: Die Cast (DC41)	is controlled by	TREA 42: Smog Hog #19
EQUI 152: Die Cast (DC41)	is controlled by	TREA 76: Nederman Filter 19N - STRU 33

SI ID: Description	Relationship type	Related SI ID: Description
EQUI 153: Die Cast (DC44)	sends to	STRU 34: Smog Hog #20 Stack
EQUI 153: Die Cast (DC44)	sends to	STRU 56: Exhaust fan #14
EQUI 153: Die Cast (DC44)	is controlled by	TREA 43: Smog Hog #20
EQUI 153: Die Cast (DC44)	is controlled by	TREA 77: Nederman Filter 20N - STRU 34
EQUI 154: Die Cast (DC45)	sends to	STRU 34: Smog Hog #20 Stack
EQUI 154: Die Cast (DC45)	sends to	STRU 51: Exhaust fan #9
EQUI 154: Die Cast (DC45)	is controlled by	TREA 43: Smog Hog #20
EQUI 154: Die Cast (DC45)	is controlled by	TREA 77: Nederman Filter 20N - STRU 34
EQUI 155: Die Cast (DC52)	sends to	STRU 26: Smog Hog #12 Stack
EQUI 155: Die Cast (DC52)	sends to	STRU 46: Exhaust fan #3
EQUI 155: Die Cast (DC52)	is controlled by	TREA 36: Smog Hog #12
EQUI 155: Die Cast (DC52)	is controlled by	TREA 72: Nederman Filter 12N2 - STRU 26
EQUI 156: Die Cast (DC50)	sends to	STRU 33: Smog Hog #19 Stack
EQUI 156: Die Cast (DC50)	sends to	STRU 51: Exhaust fan #9
EQUI 156: Die Cast (DC50)	is controlled by	TREA 42: Smog Hog #19
EQUI 156: Die Cast (DC50)	is controlled by	TREA 76: Nederman Filter 19N - STRU 33

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 17 of 672

SI ID: Description	Relationship type	Related SI ID: Description
EQUI 157: Die Cast (DC51)	sends to	STRU 16: Smog Hog #2 Stack
EQUI 157: Die Cast (DC51)	sends to	STRU 56: Exhaust fan #14
EQUI 157: Die Cast (DC51)	is controlled by	TREA 26: Smog Hog #2
EQUI 157: Die Cast (DC51)	is controlled by	TREA 62: Nederman Filter 2N1 - STRU 16
EQUI 158: Die Cast (DC53)	sends to	STRU 30: Smog Hog #16 Stack
EQUI 158: Die Cast (DC53)	sends to	STRU 52: Exhaust fan #10
EQUI 158: Die Cast (DC53)	is controlled by	TREA 39: Smog Hog #16
EQUI 158: Die Cast (DC53)	is controlled by	TREA 73: Nederman Filter 16N - STRU 30
EQUI 160: Billet Saw	sends to	STRU 35: Smog Hog #21 Stack
EQUI 166: Coating Room Bulk Solvent Tank	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 167: Solvent Vapor Remediation System	sends to	STRU 41: Solvent Vapor Remediation System Stack
EQUI 167: Solvent Vapor Remediation System	is controlled by	TREA 50: Carbon Canister 1
EQUI 167: Solvent Vapor Remediation System	is controlled by	TREA 51: Carbon Canister 2
EQUI 168: Building Management System		
EQUI 169: Coating Room 1 Pressure Drop Gauge	is monitored by	EQUI 168: Building Management System
EQUI 170: Coating Room 2 Pressure Drop Gauge	is monitored by	EQUI 168: Building Management System

SI ID: Description	Relationship type	Related SI ID: Description
		Management System
EQUI 171: Coating Room 3 Pressure Drop Gauge	is monitored by	EQUI 168: Building Management System
EQUI 172: Battery Terminal Post Coater 29	sends to	STRU 53: Exhaust fan #11
EQUI 173: Coating Room Soaker Tank	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 174: Solvent Distillation Unit	sends to	STRU 59: Exhaust fan #12
EQUI 176: VOC CEMS (STRU 73)		
EQUI 177: Roof-top Unit 1N		
EQUI 178: Roof-top Unit 2N		
EQUI 179: Roof-top Unit 3N		
EQUI 180: Roof-top Unit 4N		
EQUI 181: Roof-top Unit 5N		
EQUI 182: Roof-top Unit 6N		
EQUI 183: Roof-top Unit 7N		
EQUI 184: Roof-top Unit 8N		
EQUI 185: Roof-top Unit 9N		
EQUI 186: Roof-top Unit 10N		
EQUI 187: Roof-top Unit 11N		
EQUI 188: Roof-top Unit 12N		
EQUI 189: Roof-top Unit 13N		
EQUI 190: Roof-top Unit 14N		
EQUI 191: Roof-top Unit 15N		
EQUI 192: Roof-top Unit 16N		

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 18 of 672

SI ID: Description	Relationship type	Related SI ID: Description
EQUI 193: Roof-top Unit 17N		
EQUI 194: Roof-top Unit 18N		
EQUI 195: Roof-top Unit 19N		
EQUI 196: Roof-top Unit 20N		
EQUI 197: Roof-top Unit 21N		
EQUI 198: Make-up Air Unit 12N		
EQUI 199: Make-up Air Unit 13N		
EQUI 200: Make-up Air Unit 14N		
EQUI 201: Make-up Air Unit 15N		
EQUI 202: Make-up Air Unit 16N		
EQUI 203: Space Heater 1N		
EQUI 204: Space Heater 2N		
EQUI 205: Space Heater 3N		
EQUI 206: Space Heater 4N		
EQUI 207: Space Heater 5N		
EQUI 208: Roof-top Unit 1S		
EQUI 209: Roof-top Unit 2S		
EQUI 210: Roof-top Unit 3S		
EQUI 211: Roof-top Unit 4S		
EQUI 212: Roof-top Unit 5S		
EQUI 213: Roof-top Unit 6S		
EQUI 214: Roof-top Unit 7S		
EQUI 215: Roof-top Unit 8S		
EQUI 216: Roof-top Unit 9S		
EQUI 217: Make-up Air Unit 1S		

SI ID: Description	Relationship type	Related SI ID: Description
EQUI 218: Make-up Air Unit 2S		
EQUI 219: Battery Terminal Post Coater 33	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 219: Battery Terminal Post Coater 33	is controlled by	TREA 58: Nederman Filter - EQUI 219
EQUI 220: Battery Terminal Post Coater 34	sends to	STRU 73: Battery Terminal Post Coater Stack
EQUI 220: Battery Terminal Post Coater 34	is controlled by	TREA 59: Nederman Filter - EQUI 220
EQUI 221: Tin Melt Pot	sends to	STRU 1: Smog Hog #15 Stack
EQUI 221: Tin Melt Pot	is controlled by	TREA 1: Smog Hog #15
EQUI 221: Tin Melt Pot	is controlled by	TREA 60: Nederman Filter 15N - STRU 1
EQUI 222: Natural Gas Bake Oven	sends to	STRU 70: Natural Gas Bake Oven Stack
EQUI 223: Coining Booth 1	sends to	STRU 71: Coining Booth Stacks
EQUI 224: Coining Booth 2	sends to	STRU 71: Coining Booth Stacks
EQUI 225: Coining Booth 3	sends to	STRU 71: Coining Booth Stacks
EQUI 226: Coining Booth 4	sends to	STRU 71: Coining Booth Stacks
EQUI 227: Coining Booth 5	sends to	STRU 71: Coining Booth Stacks
EQUI 228: Coining Booth 6	sends to	STRU 71: Coining Booth Stacks

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 19 of 672

SI ID: Description	Relationship type	Related SI ID: Description
EQUI 229: Coining Booth 7	sends to	STRU 71: Coining Booth Stacks
EQUI 230: Coining Booth 8	sends to	STRU 71: Coining Booth Stacks
EQUI 231: Coining Booth 9	sends to	STRU 71: Coining Booth Stacks
EQUI 232: Coining Booth 10	sends to	STRU 71: Coining Booth Stacks
EQUI 233: Battery Terminal Post Coater 19	sends to	STRU 50: Exhaust fan #8
EQUI 234: Make-up Air Unit 17N		
EQUI 235: Roof-top Unit 10S		
EQUI 236: Roof-top Unit 11S		
EQUI 240: Prototype Coater	sends to	STRU 72: Fume Hood Vent
FUGI 1: Cooling Tower 1 (CT1)		
FUGI 2: Cooling Tower 2 (CT2)		
FUGI 3: Paved Roads		
FUGI 4: Cooling Tower #3 (CT3)		
FUGI 5: South Building Cooling Tower (CT4)		
STRU 1: Smog Hog #15 Stack		
STRU 4: Emergency Generator Engine Stack		
STRU 15: Smog Hog #1 Stack		
STRU 16: Smog Hog #2 Stack		
STRU 17: Smog Hog #3 Stack		
STRU 20: Smog Hog #6 Stack		
STRU 23: Smog Hog #9 Stack		
STRU 24: Smog Hog #10 Stack		

SI ID: Description	Relationship type	Related SI ID: Description
STRU 25: Smog Hog #11 Stack		
STRU 26: Smog Hog #12 Stack		
STRU 30: Smog Hog #16 Stack		
STRU 31: Smog Hog #17 Stack		
STRU 32: Smog Hog #18 Stack		
STRU 33: Smog Hog #19 Stack		
STRU 34: Smog Hog #20 Stack		
STRU 35: Smog Hog #21 Stack		
STRU 38: North Building		
STRU 41: Solvent Vapor Remediation System Stack		
STRU 42: South Building		
STRU 43: Exhaust fan #7		
STRU 44: Exhaust fan #1		
STRU 45: Exhaust fan #2		
STRU 46: Exhaust fan #3		
STRU 47: Exhaust fan #4		
STRU 48: Exhaust fan #5		
STRU 49: Exhaust fan #6		
STRU 50: Exhaust fan #8		
STRU 51: Exhaust fan #9		
STRU 52: Exhaust fan #10		
STRU 53: Exhaust fan #11		
STRU 56: Exhaust fan #14		
STRU 57: Shipping vent 20		

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 20 of 672

SI ID: Description	Relationship type	Related SI ID: Description
STRU 59: Exhaust fan #12		
STRU 60: Exhaust fan #13		
STRU 68: Melt Pot Room Vent		
STRU 69: Doe Run Melt Pot Natural Gas Vent		
STRU 70: Natural Gas Bake Oven Stack		
STRU 71: Coining Booth Stacks		
STRU 72: Fume Hood Vent		
STRU 73: Battery Terminal Post Coater Stack	is monitored by	EQUI 176: VOC CEMS (STRU 73)
STRU 74: Smog Hog #5 Stack		
STRU 75: Smog Hog #8 Stack		
TREA 1: Smog Hog #15		
TREA 25: Smog Hog #1		
TREA 26: Smog Hog #2		
TREA 27: Smog Hog #3		
TREA 30: Smog Hog #6		
TREA 33: Smog Hog #9		
TREA 34: Smog Hog #10		
TREA 35: Smog Hog #11		
TREA 36: Smog Hog #12		
TREA 39: Smog Hog #16		
TREA 40: Smog Hog #17		
TREA 41: Smog Hog #18		
TREA 42: Smog Hog #19		
TREA 43: Smog Hog #20		

SI ID: Description	Relationship type	Related SI ID: Description
TREA 50: Carbon Canister 1	is controlled in series by	TREA 51: Carbon Canister 2
TREA 51: Carbon Canister 2		
TREA 52: HEPA Filter - Tool Room 1 Abrasive Blasting		
TREA 53: HEPA Filter - Tool Room 2 Abrasive Blasting		
TREA 54: HEPA Filter - DC Abrasive Blasting		
TREA 55: Nederman Filter - EQUI 84		
TREA 56: Nederman Filter - EQUI 88		
TREA 57: Nederman Filter - EQUI 95		
TREA 58: Nederman Filter - EQUI 219		
TREA 59: Nederman Filter - EQUI 220		
TREA 60: Nederman Filter 15N - STRU 1	is controlled in series by	TREA 1: Smog Hog #15
TREA 61: Nederman Filter 1N - STRU 15	is controlled in series by	TREA 25: Smog Hog #1
TREA 62: Nederman Filter 2N1 - STRU 16	is controlled in series by	TREA 26: Smog Hog #2
TREA 63: Nederman Filter 2N2 - STRU 16	is controlled in series by	TREA 26: Smog Hog #2
TREA 64: Nederman Filter 3N - STRU 17	is controlled in series by	TREA 27: Smog Hog #3
TREA 65: Nederman Device 5N - STRU 74	is controlled in series by	TREA 78: Smog Hog #5
TREA 66: Nederman Filter 6N - STRU 20	is controlled in series by	TREA 30: Smog Hog #6
TREA 67: Nederman Device 8N - STRU 75	is controlled in series by	TREA 79: Smog-Hog #8
TREA 68: Nederman Filter 9N - STRU 23	is controlled in series by	TREA 33: Smog Hog #9
TREA 69: Nederman Filter 10N - STRU 24	is controlled in series by	TREA 34: Smog Hog #10
TREA 70: Nederman Filter 11N - STRU 25	is controlled in series by	TREA 35: Smog Hog #11
TREA 71: Nederman Filter 12N1 - STRU 26	is controlled in series by	TREA 36: Smog Hog #12
TREA 72: Nederman Filter 12N2 - STRU 26	is controlled in series by	TREA 36: Smog Hog #12

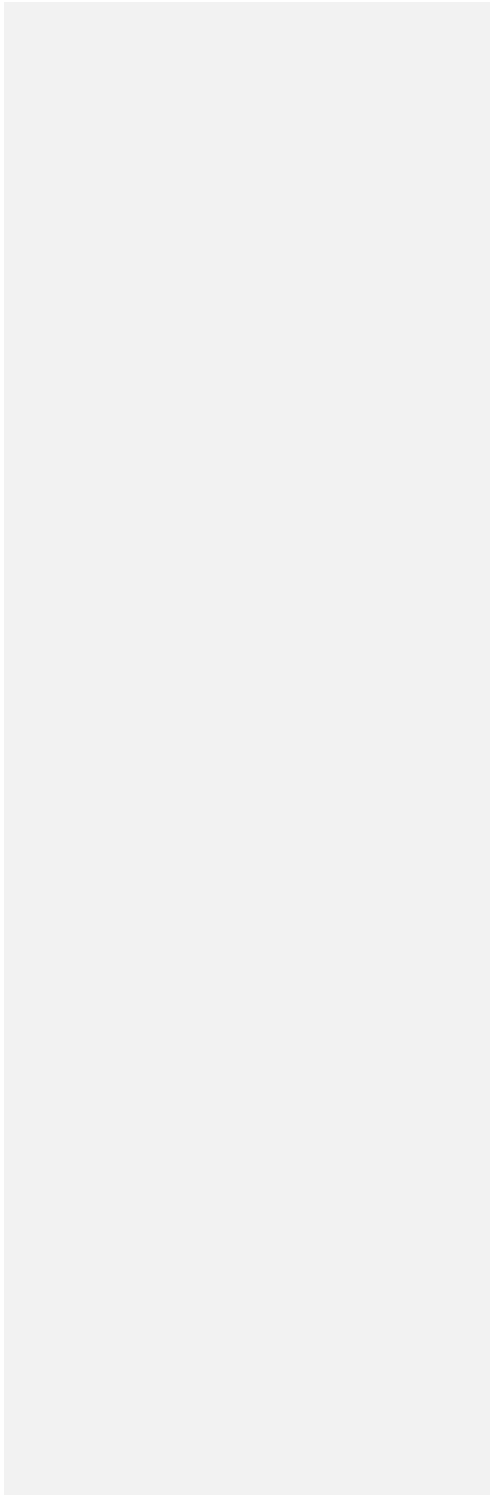
Commented [A3]: EQUI 84 and EQUI 88 share TREA 55. There is no TREA 56.

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 21 of 672

SI ID: Description	Relationship type	Related SI ID: Description
TREA 73: Nederman Filter 16N - STRU 30	is controlled in series by	TREA 39: Smog Hog #16
TREA 74: Nederman Filter 17N - STRU 31	is controlled in series by	TREA 40: Smog Hog #17
TREA 75: Nederman Filter 18N - STRU 32	is controlled in series by	TREA 41: Smog Hog #18
TREA 76: Nederman Filter 19N - STRU 33	is controlled in series by	TREA 42: Smog Hog #19

SI ID: Description	Relationship type	Related SI ID: Description
TREA 77: Nederman Filter 20N - STRU 34	is controlled in series by	TREA 43: Smog Hog #20
TREA 78: Smog Hog #5		
TREA 79: Smog-Hog #8		



5. Limits and other requirements

Requirement number	Requirement and citation
TFAC 1	Water Gremlin Co
5.1.1	<p>Permit Appendices: This permit contains appendices as listed in the permit Table of Contents. The Permittee shall comply with all requirements contained in the following appendices:</p> <p>Appendix A: Insignificant activities and general requirements;</p> <p>Appendix B: Maximum material content, emissions calculations assumptions, and analytical methods for coating operations;</p> <p>Appendix C: NAAQS modeling and AERA parameters;</p> <p>Appendix D: Emission factors for lead processing units;</p> <p>Appendix E: Performance test operating conditions and recordkeeping;</p> <p>Appendix F: VOC ambient air monitoring plan;</p> <p>Appendix G: General public preclusion plan;</p> <p>Appendix H: Minimum requirements for a revised VOC and TO-15 ambient monitoring plan; and</p> <p>Appendix I*: Equipment inventory at the time of permit issuance;</p> <p>Appendix J: Coating usage tracking protocol;</p> <p>Appendix K: 40 CFR pt. 60, subp. IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines; and</p> <p>Appendix L: 40 CFR pt. 60, subp. A - General Provisions.</p> <p>*Note: Fugitive emissions sources are not included in this Appendix but are covered by this permit (see section 4). [Minn. R. 7007.0800, subp. 2(A) & (B)]</p>
5.1.2	<p>The Permittee must comply with Minn. Stat. 116.385. The Permittee may not use trichloroethylene (TCE) at its permitted facility including in any manufacturing, processing, or cleaning processes, except as described in Minn. Stat. 116.385, subd. 2(b) and 4. The permittee used TCE before the issuance of Permit No. 12300341-101 and has replaced TCE; any chemical replacing TCE must be less toxic to human health and reviewed in a form determined and approved by the Commissioner of the Pollution Control Agency. This is a state-only requirement and is not enforceable by the U.S. Environmental Protection Agency (EPA) Administrator and citizens under the Clean Air Act. [Minn. R. 7007.0100, subp. 7(X), Minn. Stat. 116.385]</p>
5.1.3	<p>This permit establishes limits on the facility to keep it a minor source under New Source Review, Part 70, and NESHAPs. The Permittee cannot make any change at the source that would require a change to a Title I Condition or a synthetic minor limit that ensures the facility avoid a major source status under New Source Review, Part 70, and NESHAPs until a major permit amendment has been issued. This includes changes that might otherwise qualify as insignificant modifications and minor or moderate amendments. [Minn. R. 7007.0100, subp. 25(A), Minn. R. 7007.1500, subp. 1(C), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, Title I Condition: Avoid major source under 40 CFR 63.2, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.1.4	<p>Equipment Labeling: The Permittee shall permanently affix a unique number to each emissions unit for tracking purposes. Each number shall correlate the unit to the appropriate Subject Item number used in this permit. The number can be affixed by placard, stencil, or other means. The number shall be maintained so that it is readable and visible at all times from a safe distance. If equipment is added, it shall be given a new unique number; numbers from replaced or removed equipment shall not be reused. [Minn. R. 7007.0800, subp. 2(A)]</p>
5.1.5	<p>Equipment Inventory: The facility equipment inventory at the time of permit issuance is listed in Appendix I. The Permittee shall maintain a written revision to Appendix I with a current list of all emissions units, operating monitors, and control equipment on site. The Permittee shall update the list in Appendix I to include any replaced, modified, or new equipment prior to making the change.</p>

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 23 of 672

Requirement number	Requirement and citation
	The list shall correlate the units to the Subject Item numbers used in this permit and shall include the data on GI-04, GI-05B, GI-05C, and GI-05F. The date of construction shall be the date the change was made for replaced, modified, or new equipment. [Minn. R. 7007.0800, subp. 2(A)]
5.1.6	<p>PERMIT SHIELD: Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.</p> <p>This permit shall not alter or affect the liability of the Permittee for any violation of applicable requirements prior to or at the time of permit issuance. [Minn. R. 7007.1800(A)(2)]</p>
5.1.7	Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted. [Minn. R. 7011.0020]
5.1.8	Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated. [Minn. R. 7007.0800, subp. 16(J), Minn. R. 7007.0800, subp. 2(A) & (B)]
5.1.9	Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 16(J)]
5.1.10	Operation Changes: In any shutdown, breakdown, or deviation the Permittee must immediately or as soon as possible considering plant and personnel safety take all practical steps to modify operations to reduce the emission of any regulated air pollutant. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment are permitted to operate. [Minn. R. 7019.1000, subp. 4]
5.1.11	Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150. [Minn. R. 7011.0150]
5.1.12	Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act. [Minn. R. 7030.0010-7030.0080]
5.1.13	Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A). [Minn. R. 7007.0800, subp. 9(A)]
5.1.14	The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16. [Minn. R. 7007.0800, subp. 16]
5.1.15	Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in this permit. [Minn. R. ch. 7017]
5.1.16	<p>Performance Test Notifications and Submittals:</p> <p>Performance Test Notification and Plan: due 30 days before each Performance Test</p> <p>Performance Test Pre-test Meeting: due seven days before each Performance Test</p>

Commented [A4]: An exception must be made for the total enclosure test, or the total enclosure test due date must be moved back to 60 or 90 days to allow Water Gremlin time to comply with the requirement for a test notification and plan and time to schedule the test.

Requirement number	Requirement and citation
	<p>Performance Test Report: due 45 days after each Performance Test</p> <p>The Notification, Test Plan, and Test Report must be submitted in a format specified by the commissioner. [Minn. R. 7017.2017, Minn. R. 7017.2030, subps. 1-4, Minn. R. 7017.2035, subps. 1-2]</p>
5.1.17	<p>Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's Notice of Compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3. The limit is final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025, subp. 3]</p>
5.1.18	<p>Measuring and Monitoring Equipment Operation, Maintenance, Calibration and Employee Training- The Permittee shall:</p> <ol style="list-style-type: none"> 1. Operate and maintain the required measuring and monitoring equipment in accordance with the manufacturer's specifications or in accordance with the standards established by National Institute of Standards and Technology of the U.S. Department of Commerce (NIST). The Permittee shall keep copies of operation and maintenance manuals and procedures onsite and available for inspection. 2. Calibrate or replace required monitoring equipment every 12 months; or calibrate at the frequency stated in the manufacturer's specifications; and 3. Provide new staff with initial training and current staff with annual training on how to properly operate all measuring and monitoring equipment. <p>For each measuring and monitoring device, the Permittee shall maintain a record of the date and description of each of the following activities resulting from each, including any corrective actions taken:</p> <ol style="list-style-type: none"> 1. Maintenance and repairs; 2. Calibrations, including the date conducted, and any corrective action that resulted. The Permittee shall include the calibration frequencies, procedures, and manufacturer's specifications (if applicable) in the Operations and Maintenance Plan; and 3. Initial and annual staff training. <p>Any requirements applying to continuous emissions monitors are listed separately in this permit. [Minn. R. 7007.0800, subps. 2(A) and (B), Minn. R. 7007.0800, subp. 4(D), Minn. Stat. 116.07, subd. 9(2), and Minn. Stat. 116.385, subd. 3]</p>
5.1.19	<p>Operation of Monitoring Equipment: Unless noted elsewhere in this permit, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system. [Minn. R. 7007.0800, subp. 4(D)]</p>
5.1.20	<p>Recordkeeping: Retain all records at the stationary source, unless otherwise specified within this permit, for five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A). [Minn. R. 7007.0800, subp. 5(C)]</p>
5.1.21	<p>Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350, subp. 2), including records of the emissions resulting from those changes. [Minn. R. 7007.0800, subp. 5(B)]</p>
5.1.22	<p>If the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. For non-expiring permits, these records shall be kept for a period of five years from the date that the</p>

Commented [A5]: MPCA should include a list of what it considers "measuring and monitoring equipment." Water Gremlin understands this to be the coating room scales and the diecast throughput software. This is not anything relating to pollution control equipment (5.1.9). Please confirm.

Requirement number	Requirement and citation
	change was made. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format. [Minn. R. 7007.1200, subp. 4]
5.1.23	<p>Shutdown Notifications: Notify the commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the Permittee does not have advance knowledge of the shutdown, the Permittee must notify the commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in items A, B, and C of Minn. R. 7019.1000, subp. 3.</p> <p>At the time of notification, the owner or operator must inform the commissioner of the cause of the shutdown and the estimated duration. The owner or operator must notify the commissioner when the shutdown is over. [Minn. R. 7019.1000, subp. 3]</p>
5.1.24	<p>Breakdown Notifications: Notify the commissioner within 24 hours of a breakdown of more than one hour of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in items A, B, and C of Minn. R. 7019.1000, subp. 2.</p> <p>At the time of notification or as soon as possible thereafter, the Permittee must inform the commissioner of the cause of the breakdown and the estimated duration. The Permittee must notify the commissioner when the breakdown is over. [Minn. R. 7019.1000, subp. 2]</p>
5.1.25	<p>Notification of Deviations Endangering Human Health or the Environment: Immediately after discovery of the deviation or immediately after when the deviation reasonably should have been discovered, notify the commissioner either orally or by e-mail, or telephone the state duty officer at 800-422-0798 or 651-649-5451, of any deviation from permit conditions that could endanger human health or the environment. [Minn. R. 7019.1000, subp. 1]</p>
5.1.26	<p>Notification of Deviations Endangering Human Health or the Environment Report: Within two working days of discovery, notify the commissioner in writing of any deviation from permit conditions that could endanger human health or the environment. Include the following information in this written description:</p> <ol style="list-style-type: none">1. the cause of the deviation;2. the exact dates of the period of the deviation, if the deviation has been corrected;3. whether or not the deviation has been corrected;4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation. [Minn. R. 7019.1000, subp. 1]
5.1.27	<p>Relocation Notification Form: due 48 hours before change in location. Submit notification on a form approved by the Commissioner. [Minn. R. 7007.0800, subp. 12(C)]</p>
5.1.28	<p>Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.</p> <p>Upon adoption of a new or amended federal applicable requirement, and if there are three or more years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150 - 7007.1500]</p>

Requirement number	Requirement and citation
5.1.29	Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H). Performance testing deadlines from the General Provisions of 40 CFR pt. 60 and pt. 63 are examples of deadlines for which the MPCA does not have authority to grant extensions and therefore do not meet the requirements of Minn. R. 7007.1400, subp. 1(H). [Minn. R. 7007.1400, subp. 1(H)]
5.1.30	Within 15 days of a request from the Commissioner, the Permittee must provide a complete summary of all performance tests required at the facility including the subject item, pollutant, most recent test date (if applicable), and the date of the next test in an approved format. [Minn. R. 7007.0800, subp. 16(L)]
5.1.31	Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance. Submit in a format specified by the Commissioner. [Minn. R. 7019.3000-7019.3100]
5.1.32	Emission Fees: due 30 days after receipt of an MPCA bill. [Minn. R. 7002.0005-7002.0085]
5.1.33	Modeled Parameters for PM10, PM2.5, NO2, and lead NAAQS: The parameters used in NAAQS modeling for Permit No. 12300341-101 are listed in Appendix C of this permit. The parameters describe the operation of the facility at maximum permitted capacity. The purpose of listing the parameters in the appendix is to provide a benchmark for future changes. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.34	Modeled Parameters for Air Emissions Risk Analysis (AERA): The parameters for 1,2-(trans-) Dichloroethylene and lead used in the AERA for Permit No. 12300341-101 are listed in Appendix C of this permit. The parameters describe the operation of the facility at maximum permitted capacity. The purpose of listing the parameters in the appendix is to provide a benchmark for future changes. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.35	Equivalent or Better Dispersion (EBD) Modeling Triggers (Modeling Submittal Not Required before the change): Changes that do not require a permit amendment or require an administrative permit amendment do not trigger the EBD Modeling Submittal requirement before the change can be made. The Permittee shall keep updated records on site of all modeled PM10, PM2.5, NO2, and lead parameters and emission rates listed in Appendix C. The updated EBD modeling results must demonstrate compliance with NAAQS for the modeled pollutant. The Permittee shall submit any changes to modeled parameters and emission rates with the next required modeling submittal. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.36	Updated AERA Triggers (AERA Submittal Not Required before the change): Changes that do not require a permit amendment or require an administrative permit amendment do not trigger the Updated AERA Submittal requirement before the change can be made. The Permittee shall keep updated records on site of all 1,2-(trans-) Dichloroethylene, lead, and other air toxics parameters and emission rates listed in Appendix C. The updated AERA results must demonstrate compliance with the health-based air guidance values for the modeled pollutants. The Permittee shall submit any changes to AERA parameters and emission rates with the next required AERA submittal. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.37	Equivalent or Better Dispersion (EBD) Modeling Triggers (Modeling Required): Any changes that affect any modeled PM10, PM2.5, NO2, and lead parameter or emission rate listed in Appendix C, or an addition to the information documented in Appendix C, trigger the EBD Remodeling Submittal requirement. This includes changes that do not require a permit amendment as well as changes that require any type of permit amendment. The updated EBD modeling results must demonstrate compliance with NAAQS for the modeled pollutant. The schedule for EBD Remodeling submittal is defined elsewhere in this permit. Changes made under the administrative amendment process are

Commented [A6]: The statement that "this includes changes that do not require a permit amendment" in 5.1.37 contradicts 5.1.35 in which a change that does not require a permit amendment does not require EBD modeling submitted prior to the change. Changes that would reduce emissions should not be subject to 5.1.37.

Requirement number	Requirement and citation
	excluded from this requirement. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.38	<p>Updated AERA Triggers (AERA Required): The following changes trigger the Updated AERA Submittal requirement. This includes changes that do not require a permit amendment as well as changes that require any type of permit amendment:</p> <ol style="list-style-type: none"> 1. Any changes that replace t-DCE containing material with other VOC containing coating formulations and solvents other than the UV coating and water-based coating operations authorized by this permit. This type of change requires a major amendment to this permit. 2. Any changes that affect lead and any other air toxics parameter or emission rate listed in Appendix C, except for 1,2-(trans-) Dichloroethylene, additions to the information documented in Appendix C, changes to the health-based guidance values for any of the evaluated chemical of concern that have changed to stricter values, or there are new health-based air guidance values for chemicals of concern used at the facility. <p>The updated AERA results must demonstrate compliance with the health-based air guidance values for the modeled pollutants. The schedule for the revised AERA submittal is defined elsewhere in this permit. Changes made under the administrative amendment process are excluded from this requirement. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>
5.1.39	<p>EBD Modeling Submittal at Reissuance: The Permittee shall submit an EBD Modeling Submittal with the permit reissuance application (due as stated elsewhere in this permit) that addresses any changes made during the permit term that did not require a permit amendment but that affected any modeled PM10, PM2.5, NO2, and lead parameter or emission rate documented in Appendix C, or an addition to the information documented in Appendix C and that did not trigger the EBD Modeling Triggers (Modeling Required) requirement. [Minn. R. 7007.0800, A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>
5.1.40	<p>Updated AERA Submittal at Reissuance: The Permittee shall submit an Updated AERA Submittal with the permit reissuance application (due as stated elsewhere in this permit) that addresses any changes made during the permit term that did not require a permit amendment but that affected any lead, and other air toxics parameter or emission rate documented in Appendix C, or an addition to the information documented in Appendix C and that did not trigger the Updated AERA Triggers (AERA Required) requirement. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>
5.1.41	<p>EBD Modeling Submittal: For changes meeting the criteria in the EBD Modeling Triggers (Modeling Required) requirement, the Permittee shall submit an EBD modeling submittal in accordance with the current version of the MPCA Air Dispersion Modeling Guidance and shall wait for written approval (for major amendments, in the form of an issued permit amendment; for moderate amendments, in the form of a construction authorization letter) before making such changes. For changes that do not require a moderate or major amendment, but require a minor permit amendment, written approval of the EBD modeling may be given before permit issuance; however, this approval applies only to the EBD modeling and not to any other changes. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>
5.1.42	<p>Updated AERA Submittal: For changes meeting the criteria in the Updated AERA Triggers (AERA Required) requirement, the Permittee shall submit an updated AERA submittal in accordance with the current version of the MPCA Air Dispersion Modeling Guidance and shall wait for written approval (for major amendments, in the form of an issued permit amendment; for moderate amendments, in the form of a construction authorization letter) before making such changes. For changes that do not require a moderate or major amendment, but require a minor permit amendment, written approval</p>

Commented [A7]: 5.1.38 contradicts 5.1.36 in which a change that does not require a permit amendment does not require an AERA submittal prior to the change.

Commented [A8]: Given the requirement that changes must wait for MPCA approval, MPCA shall also provide comments or approval in a timely manner.

Commented [A9]: Given the requirement that changes must wait for MPCA approval, MPCA shall also provide comments or approval in a timely manner.

Requirement number	Requirement and citation
	of the updated AERA may be given before permit issuance; however, this approval applies only to the updated AERA and not to any other changes. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.43	EBD Modeling Submittal Content: The information submitted must include, for stack and vent sources, source emission rate, location, height, diameters, exit velocity, exit temperature, discharge direction, use of rain caps or rain hats, and, if applicable, locations and dimensions of nearby buildings. For non-stack/vent sources, this includes the source emission rate, location, size and shape, release height, and, if applicable, any emission rate scalars, and the initial lateral dimensions and initial vertical dimensions and adjacent building heights. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.44	Updated AERA Submittal Content: The information submitted must include, for stack and vent sources, source emission rate, location, height, diameters, exit velocity, exit temperature, discharge direction, use of rain caps or rain hats, and, if applicable, locations and dimensions of nearby buildings. For non-stack/vent sources, this includes the source emission rate, location, size and shape, release height, and, if applicable, any emission rate scalars, and the initial lateral dimensions and initial vertical dimensions and adjacent building heights. If this information is being submitted with a concurrent EBD modeling submittal, this information only needs to be listed once in the combined submittal. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.45	<p>Outdated EBD Baseline Modeling: Prior to conducting the EBD analysis, the Permittee shall use the current version of the MPCA Air Dispersion Modeling Guidance to determine if the Baseline Modeling (the most recent refined modeling demonstration) is consistent with the current version of the MPCA Air Dispersion Modeling Guidance (not outdated). The Permittee may verify if the Baseline modeling is consistent with current Guidance during the approval process for the modeling protocol. If the Baseline Modeling is outdated, the Permittee shall update the Baseline Modeling to be consistent with the current version of the MPCA Air Dispersion Modeling Guidance. The updated modeling will become the new Baseline Modeling.</p> <p>This requirement does not require the Permittee to complete a new refined modeling demonstration using the revisions made for the EBD demonstration. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>
5.1.46	<p>Outdated Baseline AERA: Prior to conducting the AERA analysis, the Permittee shall use the current version of the MPCA Air Dispersion Modeling Guidance to determine if the Baseline AERA (the most recent AERA demonstration) is consistent with the current version of the MPCA Air Dispersion Modeling Guidance (not outdated). The permittee may verify if the Baseline AERA is consistent with current Guidance during the approval process for the modeling and AERA protocol. If the Baseline AERA is outdated, the Permittee shall update the Baseline AERA to be consistent with the current version of the MPCA Air Dispersion Modeling Guidance. The updated AERA will become the new Baseline AERA.</p> <p>This requirement does not require the Permittee to complete a new AERA using the revisions made for the EBD demonstration. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>
5.1.47	EBD Modeling Results: The dispersion characteristics due to the revisions of the information in Appendix C must be equivalent to or better than the dispersion characteristics modeled in the most recent approved modeling submittal that shows compliance with NAAQS. The Permittee shall demonstrate this equivalency in the proposal. The requirements in this condition do not apply if the permittee has conducted refined modeling using the revised parameters and has demonstrated modeled compliance with the applicable emission limits. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]

Commented [A10]: Water Gremlin does not understand the last sentence: how would the requirement to "update the Baseline modeling" also "not require the Permittee to complete a new refined modeling demonstration"? Clarify.

Commented [A11]: If the new updated AERA is to become the new Baseline AERA, there should be no reason to re-do the previous Baseline AERA with the updated guidance. The Permittee can use the current version of the modeling guidance for the updated AERA. Additionally, Water Gremlin does not understand the last sentence: how would the requirement to "update the Baseline modeling" also "not require the Permittee to complete a new refined modeling demonstration"? Clarify.

Requirement number	Requirement and citation
5.1.48	Updated AERA Results: The dispersion characteristics due to the revisions of the information in Appendix C must be equivalent to or better than the dispersion characteristics modeled in the most recent approved modeling submittal that shows modeled compliance with NAAQS and health-based guidance values. The Permittee shall demonstrate this equivalency in the proposal. The requirements in this condition do not apply if the permittee has conducted refined modeling using the revised parameters and has demonstrated compliance with the applicable emission limits. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.49	Computer Dispersion Modeling Triggers for PM10, PM2.5, NO2, and lead NAAQS: The Permittee shall conduct a refined remodeling analysis in accordance with the Computer Dispersion Modeling requirements of this permit and the current version of the MPCA Air Dispersion Modeling Guidance if: (1) the results of the EBD modeling analysis do not demonstrate equivalent or better dispersion characteristics; (2) a conclusion cannot readily be made about the dispersion, or (3) the criteria in the EBD Modeling Triggers requirement are met and the Permittee has previously conducted three successive EBD analyses using the same Baseline Modeling, unless written approval is obtained from MPCA to get an exception from this maximum number of allowed EBD analyses. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.50	Computer Dispersion Modeling/AERA Protocol: due 180 days after receipt of written MPCA request for PM10, PM2.5, NO2, and/or lead NAAQS, and/or AERA refined modeling. The Permittee shall submit a Computer Dispersion Modeling/AERA Protocol that is complete and approvable by MPCA by the deadline in this requirement. This protocol will describe the proposed modeling methodology and input data, in accordance with the current version of the MPCA Air Dispersion Modeling Guidance. The protocol must be based on projected operating conditions under the next permit term. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.51	Computer Dispersion Modeling/AERA Protocol: due 60 days after receipt of written MPCA request for revisions to the submitted protocol for PM10, PM2.5, NO2, and/or lead NAAQS, and/or AERA modeling. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.52	Computer Dispersion Modeling/AERA Results: due 180 days after receipt of written MPCA approval of Computer Dispersion Modeling Protocol for PM10, PM2.5, NO2, and/or lead NAAQS, and/or AERA. The Permittee shall submit a final Computer Dispersion Modeling Report that is complete and approvable by MPCA by the deadline in this requirement. The submittal shall adhere to the current version of the MPCA Air Dispersion Modeling Guidance and the approved Computer Dispersion Modeling Protocol. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.53	The Permittee shall continue to conduct VOC and TO-15 Ambient Air Monitoring that was required by MPCA before issuance of Permit No. 12300341-101. Ambient air monitoring shall be conducted in accordance with the MPCA-approved VOC ambient air monitoring plan in the Administrative Order dated January 17, 2020, and included in this permit as Appendix F. This monitoring plan shall continue until the time the MPCA approves a revised ambient monitoring plan. The permittee shall compile 24-hour VOC and TO-15 monitoring results by the last day of each month for the previous monitoring month. The results shall be reported to AQRoutineReport.PCA.state.mn.us and made available to MPCA at any other time. [Minn. R. 7007.0800, subp. 2, Minn. R. 7007.0800, subps. 4(C) & (D), Minn. Stat. 116.385, subd. 3, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.54	The Permittee shall submit a revised ambient monitoring plan for VOC and TO-15 Ambient Air Monitoring due within 30 days of permit issuance. The revised ambient monitoring protocol shall address the following as described in Appendix H 1) Number and locations of monitoring sites following EPA siting requirements. 2) Sampling frequency: during the first 365 days beginning on permit issuance date, the sampling frequency must remain as in the MPCA-approved VOC ambient air monitoring plan in the Administrative Order dated January 17, 2020 and included as Appendix F in this permit.

Commented [A12]: Ambient air monitoring has been conducted for the facility since 2019. MPCA has used the data to calculate annual averages, even though that is not the form of the TDCE toxicity standard, and attempt to calibrate WG's allowable TDCE limit from those data, reflected in this permit. There is no further need for ambient monitoring as the coating usage recordkeeping and inventories will serve as the compliance mechanisms for Water Gremlin. If MPCA has further concerns about community exposure, MPCA should fund the monitoring in actual ambient air, not on Water Gremlin property. See Water Gremlin's comment letter for further details.

Requirement number	Requirement and citation
	3) Data submittal frequency 4) TO-15 analytes include 1,2-(trans-) Dichloroethylene. [Minn. R. 7007.0800, subp. 2, Minn. R. 7007.0800, subps. 4(C) & (D), Minn. Stat. 116.385, subd. 3, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.55	The Permittee shall submit a revised Ambient Monitoring Plan: due 60 calendar days after Date of Receipt of written MPCA request for revisions to the submitted Ambient Air Monitoring Plan for VOC and TO-15. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) & (D), Minn. Stat. 116.385, subd. 3, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.56	The Permittee shall conduct VOC and TO-15 Ambient Air Monitoring due within 30 days following approval of revised ambient air monitoring plan. Ambient air monitoring shall be conducted in accordance with the MPCA-approved Revised VOC ambient air monitoring plan. The VOC and TO-15 ambient monitoring may not be interrupted during the transition of ambient monitoring to the revised plan. [Minn. R. 7007.0800, subp. 2, Minn. R. 7007.0800, subps. 4(C) & (D), Minn. Stat. 116.385, subd. 3, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.1.57	<p>Discontinuation of VOC Ambient Air Monitoring: The Permittee shall operate and maintain the VOC ambient air monitoring network according to the MPCA-approved Ambient Air Monitoring Plan until the Commissioner determines that the following criteria have been met:</p> <p>1) At least twenty-four months of ambient air monitoring is conducted after permit issuance pursuant to the Ambient Air Monitoring Plan approved by MPCA and implemented as prescribed elsewhere in this permit.</p> <p>a) The minimum twenty-four months of ambient monitoring after permit issuance shall exclude periods when Water Gremlins shuts down 1,2-(trans-) Dichloroethylene coating operations so that the length of the ambient monitoring period represents 24 months of measured ambient concentrations during actual coating operation with 1,2-(trans-) Dichloroethylene containing materials. Periods of coating operations shutdowns do not include days when operation would normally stop due to weekends and holidays if each of these periods does not exceed more than five consecutive days. This minimum twenty-four months of ambient monitoring after permit issuance will be referred to as the ambient monitoring period under evaluation for approval of discontinuation of ambient monitoring for 1,2-(trans-) Dichloroethylene.</p> <p>b) At least 75 percent of scheduled samples in a calendar year and at least 75 percent of samples in a 3-month quarter for the ambient monitoring period are needed to produce valid summary statistics and meet completeness requirements.</p> <p>2) There are no exceedances of the 1,2-(trans-) Dichloroethylene Risk Assessment Advise of 20 µg/m³ as a 365-day rolling average of measurements at any active monitoring site during the ambient air monitoring period under evaluation for approval of discontinuation of ambient monitoring for 1,2-(trans-) Dichloroethylene.</p> <p>3) The facility's 1,2-(trans-) Dichloroethylene emissions are less than or equal to 32.6 tons per year based on a 365-day rolling sum during the ambient air monitoring period under evaluation for approval of discontinuation of ambient monitoring for 1,2-(trans-) Dichloroethylene. In order to consider any period of time within the first year of operation after permit issuance, the calculation of 1,2-(trans-) Dichloroethylene emissions as a 365-day rolling sum must include the corresponding emissions from the year prior to permit issuance.</p> <p>4) The probability of future long-term average 1,2-(trans-) Dichloroethylene concentrations being above health guidelines is low. This low probability will be demonstrated as follows:</p> <p>a) This test is based on the criteria that must be met to discontinue ambient air monitoring for criteria pollutants as adapted from EPA Ambient Air Monitoring Network Assessment Guidance</p>

Commented [A13]: 5.1.57 1a disincentivizes Water Gremlin from reducing coating usage. If the VOC-based coaters do not need to run for business purposes, Water Gremlin would need to choose between running them in order to maintain 24-months of consecutive data and eliminating emissions that day. Water Gremlin understands that MPCA is constructing hypothetical scenarios whereby Water Gremlin could "game" the monitors, but that is not nor has it been Water Gremlin's intention. MPCA is regulating business activities to the detriment of reducing emissions. See Water Gremlin's comment letter for further details.

Requirement number	Requirement and citation
	<p>(Section 4.1) but modified to meet the issues related to air toxics monitoring and comparison to the 1,2-(trans-) Dichloroethylene inhalation Risk Assessment Advise of 20 µg/m³ calculated as a 365-day rolling average.</p> <p>b) For each sampling date, calculate the 365-day rolling average concentration of 1,2-(trans-) Dichloroethylene for each monitoring station in operation during the ambient air monitoring period under evaluation for approval of discontinuation of ambient monitoring for 1,2-(trans-) Dichloroethylene. During the first year after permit issuance, the 365-day rolling average concentration of 1,2-(trans-) Dichloroethylene at each active monitoring station must include the corresponding 1,2-(trans-) Dichloroethylene monitoring results for the year prior to permit issuance so that the 365-day rolling average concentration can be calculated for each sampling date during the first year of the permit term.</p> <p>c) Calculate a 95 percent upper confidence limit (UCL) for all the calculated 365-day rolling average 1,2-(trans-) Dichloroethylene concentrations at each monitoring site operated during the ambient air monitoring period under evaluation for approval of discontinuation of ambient monitoring for 1,2-(trans-) Dichloroethylene. If the distribution of data is not normal, bootstrapping using bias-corrected and accelerated intervals is recommended for generating means and confidence intervals. The 95 percent UCL is the 95th percentile of means generated using bootstrap sampling. At least 1,000 bootstrap samples should be taken. If the data is normal, the mean and confidence interval should be generated using a method that is appropriate for the data. Determine the highest 95 percent UCL from all monitoring sites operated during the ambient air monitoring period under evaluation for approval of discontinuation of ambient monitoring for 1,2-(trans-) Dichloroethylene. Daily monitoring results below the reporting limit should be replaced by the reporting limit. The 95 percent UCL cannot be calculated for any 365-day rolling average which fails to meet completeness requirements.</p> <p>d) Compare the highest 95 percent UCL from all monitoring stations to 80 percent of Risk Assessment Advise for 1,2-(trans-) Dichloroethylene, which is equal to 16 µg/m³ based on a 365-day rolling average. If the highest 95 percent UCL is less than or equal to 16 µg/m³ 1,2-(trans-) Dichloroethylene based on a 365-day rolling average after the ambient monitoring period, ambient monitoring may be discontinued if all other conditions are met. Written approval from the Commissioner must be obtained before ambient monitoring may be discontinued.</p> <p>5) The permit remains in place with emission limits that result in measured 1,2-(trans-) Dichloroethylene ambient concentrations below inhalation Risk Assessment Advise of 20 µg/m³ calculated as 365-day rolling average as approved by MPCA. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) & (D), Minn. Stat. 116.385, subd. 3, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>
5.1.58	<p>General Public Preclusion Plan - Boundary Map</p> <p>Within 180 days after Permit Issuance, the Permittee shall use fencing, control access points, restriction signage, and remote monitoring as specified in Appendix G to maintain control over the fence line.</p> <p>Appendix G to this permit is a map that depicts the boundary at which the access of the general public can be controlled and compliance with the National Ambient Air Quality Standards (NAAQS) can be demonstrated. Appendix G identifies the forms of control the Permittee will use to restrict access to the general public along portions of the fence line. The general public does not include employees or other categories of people who have been directly authorized by the property owner to enter or</p>

Commented [A14]: It is not necessary or appropriate to look back to data collected prior to permit issuance. If MPCA will not remove this requirement and leaves it as-is, monitoring will be required for two years and there will be a full year of data with which to calculate a 365-day rolling average. Further, the standard of the chronic RAA that MPCA is applying should be compared to a long-term average concentration. After two years of collecting data, the two-year average with all the data would be more appropriate for evaluating against the chronic standard. Note: Water Gremlin maintains that that PPRTV chronic value of 40 ug/m3 is the appropriate benchmark. See Water Gremlin's comment letter for further details.

Commented [A15]: This method essentially lowers that RAA further to 16 ug/m3. There is no technical justification for using 80% of the standard and Water Gremlin is not familiar with any other facility for which standards are arbitrarily lowered in this manner. MPCA is adding an additional three layers of conservatism to the monitoring data. The 95% upper confidence limit on the mean is already a conservative calculation for assessing an average result. Using the full chronic threshold as the benchmark for the statistical analysis would be protective (overly protective if the chronic threshold continues to be 20 ug/m3, applied for a single year instead of over a longer period of time).

Commented [A16]: Typo: should be Advice

Commented [A17]: With the current state of the supply chain and weather concerns, Water Gremlin repeats its request for 270 days to comply with the fencing requirements of the GPPP. Water Gremlin can complete the signage and begin conducting remote monitoring within 180 days.

Requirement number	Requirement and citation
	remain on the property for a limited period of time and for a specific purpose. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subp. 4(D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.1.59	<p>General Public Preclusion Plan</p> <p>This Plan shall, at a minimum, contain the following information:</p> <ol style="list-style-type: none"> 1. A map of the facility that clearly displays the ambient air boundary. The map must indicate how access is precluded for each section of the boundary and must identify all access points (including roadways, power lines, rail spurs, etc.); 2. Locations where fencing will be implemented; 3. Restriction signage spacing (restriction signage may include notices such as "No Trespassing," "Private Property," "Do Not Enter," or "Restricted Area"); 4. Location of remote monitoring devices; 5. Operation and maintenance requirements of remote monitoring software and devices; 6. Contingency plans for downtime for remote monitoring software and devices; and 7. A response plan for when breaches occur. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subp. 4(D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.1.60	<p>Recordkeeping for Breaches of the Ambient Air Boundary</p> <p>Within three facility operating days of each observed breach, the Permittee shall document each instance that the ambient air boundary was breached by a member of the general public, including documenting the type, location, and duration of each breach. The Permittee shall identify and, within 30 days, implement measures to prevent future breaches, if necessary. A breach to the ambient boundary occurs when a member of the general public accesses property identified by the Permittee as non-ambient air other than by invitation, request or for other facility authorized business purposes.</p> <p>The observation of a breach may be direct or indirect. A direct observation includes witnessing a member of the general public on property identified as non-ambient air. Indirect observations rely on evidence of a breach, such as a cut fence, worn paths, motorized vehicle tracks, or other signs of disturbance by a member of the general public on property identified as non-ambient air.</p> <p>The Permittee shall report each breach, including all steps taken or changes made to the General Public Preclusion Plan to prevent additional breaches, in the semiannual Deviations Report required by this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subp. 4(D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>
5.1.61	<p>General Public Preclusion Plan - Fencing:</p> <p>The Permittee shall install and maintain fencing along ambient air boundary as depicted in Appendix G. The Permittee shall inspect the fence line once per quarter. The Permittee shall maintain records of inspection and required maintenance of fence line. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subp. 4(D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.1.62	<p>General Public Preclusion Plan - Remote Monitoring:</p> <p>The Permittee shall operate and maintain remote monitoring equipment to maintain the effective fence line as depicted in Appendix G. The Permittee shall monitor at a minimum of once per day. Remote monitoring devices include but are not limited to fixed cameras and drone mounted cameras. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subp. 4(D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.1.63	<p>General Public Preclusion Plan - Control of Access:</p> <p>The Permittee shall control access at any road, trail equal to or wider than 50 inches, and all</p>

Commented [A18]: The General Public Preclusion Plan has been submitted and meets the requirements in 5.1.59. Does the inclusion of 5.1.59 indicate a revision to the GPPP?

Requirement number	Requirement and citation
	abandoned railroad grades. The Permittee shall secure these access points with a locked and/or monitored gate or other physical barrier precluding access by the general public. The permittee may submit an alternative plan for control access to replace these requirements. Upon MPCA approval, the permittee may follow the approved control access plan in lieu of the "General Public Preclusion Plan - Control of Access" requirements in this permit. The alternative plan to control access must be implemented within 180 days after MPCA approval. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subp. 4(D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.1.64	The permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0090. Compliance shall be demonstrated upon written request by the MPCA. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.1.65	<p>Commercial Disclosure Regarding Facility Emissions Into the Community: The Permittee shall conduct a meeting annually to disclose factual information to the community regarding facility operations, changes made or planned to reduce air emissions, management of hazardous materials and compliance with environmental permits and regulations. The Permittee shall provide the time, date, location, format, and agenda of the meeting to the MPCA 60 days before the meeting. [Minn. R. 7007.0800, subp. 2(B), Minn. Stat. 116.07, subd. 9(2)]</p>
5.1.66	The responsible official that certifies the submittals required to be certified by rule and by this permit must meet the definition at Minn. R. 7007.0100, subp. 21. The Permittee must obtain approval of delegation of authority for the designated representative by the Commissioner as required by Minn. R. 7007.0100, subp. 21(A), (B) or (C). The certification statements must meet the requirements in Minn. R. 7007.0500 subp. 3. [Minn. R. 7007.0100, subp. 21, Minn. R. 7007.0800, subp. 6(A)]
COMG 1	VOC and 1,2 (trans) Dichloroethylene Limits and VOC Coater, Water-Based Coater, UV Coater, and Solvent Distillation Operation Requirements.
5.2.1	<p>The Permittee shall limit emissions of Volatile Organic Compounds <= 90.0 tons per year 12-month rolling sum to be calculated each operating day for the previous 12-month period as described later in this permit. All VOC-emitting equipment in COMG 1 is subject to this limit.</p> <p>VOC emissions shall be calculated based on the method described elsewhere in this permit. VOC content for each VOC-containing material shall be determined as described under the Material Content requirement in Appendix B. VOC emissions shall be calculated based on all VOC, Water Based and UV Coaters. VOC content for each VOC-containing material shall be determined as described under the Material Content requirement in Appendix B. The Permittee may account for the VOCs from coating operations that exit the facility as waste as described under the Waste Credit for Calculation of VOC Emissions requirement in COMG 1. [Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.2.2	<p>Emission for the First 365 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of 1,2-(trans-) Dichloroethylene <= 32.6 tons per year 365-day sum. The cumulative amount must be calculated each operating day for the first 365 days beginning on the date of permit issuance as described later in this permit. All 1,2-(trans-) Dichloroethylene-emitting equipment and operations at the facility are subject to this limit.</p> <p>1,2-(trans-) Dichloroethylene emissions shall be calculated based on the methods described elsewhere in this permit. 1,2-(trans-) Dichloroethylene content in VOC-containing material that includes 1,2-(trans-) Dichloroethylene shall be determined by assuming the entire VOC content is 1,2-(trans-) Dichloroethylene as described under the Material Content requirement in Appendix B. The 1,2-(trans-) Dichloroethylene emissions released outside the coating rooms must also be included as described elsewhere in this permit. The calculation of 1,2-(trans-) Dichloroethylene emissions may account for the 1,2-(trans-) Dichloroethylene that exits the facility as waste as described under the</p>

Commented [A19]: The cited regulations do not give authority to require annual community meetings. MPCA did not foster communication and actively discouraged it at the time of Water Gremlin's self-reporting. Since then, MPCA has had regular meetings with the NCCG but has declined to have the Commissioner meet with the Permittee.

Commented [A20]: Water Gremlin renews its objections to this limit as being lower than is technically or scientifically justifiable, as described in detail in our comment letter. Modeling and the RASS, which is used at nearly all other facilities in MN, would suggest a limit of 38 tpy. MPCA is applying a threshold of 20.0 ug/m3 when they are not entitled to that precision, and applying the highest result to a hypothetical resident constantly breathing the air at the location of the monitors.

Requirement number	Requirement and citation
	Waste Credit requirement in COMG 1, but only if the Permittee separately quantifies the specific 1,2-(trans-) Dichloroethylene content in the waste material as described elsewhere in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.2.3	<p>Emission for the First 365 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of 1,2-(trans-) Dichloroethylene <= 0.1600 tons per day to be calculated each operating day in the first 365 day beginning on the date of permit issuance as described later in this permit. All 1,2-(trans-) Dichloroethylene-emitting equipment and operations at the facility is subject to this limit.</p> <p>1,2-(trans-) Dichloroethylene emissions shall be calculated based on the methods described elsewhere in this permit. 1,2-(trans-) Dichloroethylene content in VOC-containing material that includes 1,2-(trans-) Dichloroethylene shall be determined by assuming the entire VOC content is 1,2-(trans-) Dichloroethylene as described under the Material Content requirement in Appendix B. The 1,2-(trans-) Dichloroethylene emissions released outside the coating rooms must also be included as described elsewhere in this permit. The calculation of 1,2-(trans-) Dichloroethylene emissions may account for the 1,2-(trans-) Dichloroethylene that exits the facility as waste as described under the Waste Credit requirement in COMG 1, but only if the Permittee separately quantifies the specific 1,2-(trans-) Dichloroethylene content in the waste material as described elsewhere in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. Stat. 116.07, subd. 4a(a),Minn. Stat. 116.385, subd. 3]</p>
5.2.4	<p>Emission Limit Effective on the 366th Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of 1,2-(trans-) Dichloroethylene <= 32.6 tons per year 365-day rolling sum to be calculated each operating day for the previous 365-day period as described later in this permit. All 1,2-(trans-) Dichloroethylene-emitting equipment and operations at the facility is subject to this limit.</p> <p>1,2-(trans-) Dichloroethylene emissions shall be calculated based on the methods described elsewhere in this permit. 1,2-(trans-) Dichloroethylene content in VOC-containing material that includes 1,2-(trans-) Dichloroethylene shall be determined by assuming the entire VOC content is 1,2-(trans-) Dichloroethylene as described under the Material Content requirement in Appendix B. The 1,2-(trans-) Dichloroethylene emissions released outside the coating rooms must also be included as described elsewhere in this permit. The calculation of 1,2-(trans-) Dichloroethylene emissions may account for the 1,2-(trans-) Dichloroethylene that exits the facility as waste as described under the Waste Credit requirement in COMG 1, but only if the Permittee separately quantifies the specific 1,2-(trans-) Dichloroethylene content in the waste material as described elsewhere in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. Stat. 116.07, subd. 4a(a),Minn. Stat. 116.385, subd. 3]</p>
5.2.5	<p>1,2-(trans-) Dichloroethylene Quarterly Purchase Audit: Each calendar quarter, the Permittee shall audit purchase records and existing inventory of 1,2-(trans-) Dichloroethylene VOC-containing material, 1,2-(trans-) Dichloroethylene VOC-containing material usage records and keep records of each audit. If the estimates of use of 1,2-(trans-) Dichloroethylene VOC-containing material based on the purchase and inventory audit shows amounts of use 20 percent or greater than what was calculated based on daily usage logs described elsewhere in the permit, the Permittee shall review and correct as needed the procedures for the daily record keeping of use of 1,2-(trans-) Dichloroethylene VOC-containing material. The audit and records of corrections shall be made available for inspection upon request. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]</p>
5.2.6	<p>Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain a record of the total weight of each VOC-containing material used in coating operations. This shall be based on written usage logs. Written usage logs shall include all data and calculations used to obtain the recorded weight(s) of each VOC-containing material used. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major</p>

Commented [A21]: Does MPCA mean to say "If the estimates of use of t-DCE VOC-containing material based on the audit show amounts greater than 20% higher than what was calculated based on usage logs . . ." rather than audit estimate > 1.2*usage estimate? As it is written, the review would be triggered if audit estimate > 0.2*usage estimate.

Requirement number	Requirement and citation
	source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.2.7	Written Usage Logs: The Permittee shall keep written records of daily coating usage following the protocol described in Appendix J. If the Permittee wishes to deviate or revise the protocol, the Permittee shall submit a notification of revisions for MPCA-approval. The Permittee may use the revised protocol following written approval from MPCA. [Minn. R. 7007.0800, subps. 4-5, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.2.8	Scale Calibration: Once per calendar year, or as often as required by manufacturer's specifications, the Permittee shall calibrate devices used for weighing coating material, as required by the protocol described in Appendix J, to manufacturer's specifications. [Minn. R. 7007.0800, subps. 4-5, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.2.9	<p>Volatile Organic Compounds: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate, record, and maintain a record of the following for the previous operating day:</p> <ol style="list-style-type: none"> 1) total weight of each VOC coating and solvent used in COMG 1, in tons; 2) total weight of each VOC-containing material used in COMG 1, including fresh solvent and solvent recovered on-site from the distiller, in tons; 3) total weight of VOC-containing material recovered on-site from the distiller, in tons; 4) total weight of water-based coating used in COMG 1, in tons; 5) total weight of UV coating used in COMG 1, in tons; 6) total weight of VOC-containing material that leaves the facility as waste according to the Waste Credit requirement if taking credit for compliance with the VOC emission limit, in tons; 7) daily VOC emissions for all equipment in COMG 1 for the previous operating day using the formulas specified elsewhere in this permit; 8) 365-day rolling sum VOC emissions for all equipment in COMG 1 for the previous 365 day period by summing the daily VOC emissions data for the previous 365 days; and 9) the daily emissions calculations of the 365-day rolling sum of VOC emissions for the first year of operation after permit issuance must include the daily VOC emissions from the corresponding previous 365 days of operation before permit issuance that was reported as required by the Stipulation Agreement dated March 1, 2019 and the Administrative Order dated January 17, 2020. [Minn. R. 7007.0800, subps. 4-5]
5.2.10	<p>1,2-(trans-) Dichloroethylene: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day:</p> <ol style="list-style-type: none"> 1) total weight of each 1,2-(trans-) Dichloroethylene coating and solvent used in COMG 1, in tons; 2) total weight of 1,2-(trans-) Dichloroethylene used in COMG 1, assuming the entire VOC content in the 1,2-(trans-) Dichloroethylene solvent is 1,2-(trans-) Dichloroethylene, in tons. This shall include fresh solvent and solvent recovered on-site from the distiller; 3) total weight of 1,2-(trans-) Dichloroethylene VOC-containing material recovered on-site from the distiller, in tons; 4) total weight of 1,2-(trans-) Dichloroethylene recovered from the distiller following the procedures in Appendix B to determine the 1,2-(trans-) Dichloroethylene content in material recovered on-site from the distiller, in tons; 5) total weight of 1,2-(trans-) Dichloroethylene VOC-containing material that left the facility as waste if taking credit for compliance with the 1,2-(trans-) Dichloroethylene emission limit, in tons; 6) total weight of 1,2-(trans-) Dichloroethylene that left the facility as waste following the procedures in Appendix B to determine the 1,2-(trans-) Dichloroethylene content if taking credit for compliance with the 1,2-(trans-) Dichloroethylene emission limit, in tons; 7) total weight of fugitive 1,2-(trans-) Dichloroethylene emissions based on measured indoor air concentrations in non-coating rooms using the default uncaptured emission rate in 5.2.14, unless

Commented [A22]: Regarding 5.2.9 part 3: The distiller runs infrequently. Further, the distiller represents recycled (unemitted) material. While any quantifiable amount in the distiller would be included in the accounting during an audit of material, there is no reason to track it daily. The amount recovered from the distiller is not included in the calculations, nor should it be as that amount is not emitted.

Commented [A23]: See above. The amount recovered from the distiller is not used in the usage calculations, nor should it be, as it is not emitted.

Requirement number	Requirement and citation
	updated as described in Appendix B, in tons; 8) total weight of 1,2-(trans-) Dichloroethylene emissions using the formulas specified in this permit; 9) during the first 365 days beginning on the date of permit issuance, the cumulative sum of 1,2-(trans-) Dichloroethylene emissions accumulated beginning on the date of permit issuance; and 10) beginning on the 366 th day following permit issuance date and daily thereafter, the 365-day rolling sum of 1,2-(trans-) Dichloroethylene emissions for the previous 365-day period by summing the daily 1,2-(trans-) Dichloroethylene emissions data for the previous 365 days. [Minn.R. 7007.0800, subp. 2(A) & (B), Minn. Stat. 116.385, subd. 3, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.2.11	Volatile Organic Compounds: Monthly Calculations. The Permittee shall calculate VOC emissions using the following equations: $\text{VOC (tons/month)} = V - W$ $V = (A1 \times B1) + (A2 \times B2) + (A3 \times B3) + \dots + (C1 \times D1) + (C2 \times D2) + (C3 \times D3) \dots + (E1 \times F1) + (E2 \times F2) + (E3 \times F3) + \dots$ $W = (G1 \times H1) + (G2 \times H2) + (G3 \times H3) + \dots$ Where: V = total weight of VOC used, in tons/month; A# = total weight of 1,2-(trans-) Dichloroethylene VOC-containing material used in COMG 1 based on daily usage logs, in tons/month. The 1,2-(trans-) Dichloroethylene VOC containing material weight must include the initial weight of prepared coating in each coater-specific tank as well as the weight of solvent added to each tank to thin out the coating; B# = weight percent VOC in A# defined in Appendix B, as a fraction. The weight percent for the formulation allowed by this permit is 0.90 lb VOC/lb solvent. The requirements to approve the use of other formulations and emission factors are defined elsewhere in this permit; C# = total weight of UV coating used in COMG 1 based on daily usage logs, in tons/month; D# = VOC emission factor for UV coating, as lb VOC/lb coating. The emission factor for UV coating allowed by this permit 0.0044 lb VOC/lb coating. The requirements to approve the use of other VOC emission factors are defined elsewhere in this permit. E# = total weight of each water-based coating used in COMG 1 based on daily usage logs, in tons/month; F# = VOC emission factor from water-based coating, as lb VOC/lb solids. The emission factor for water-based coating allowed by this permit 0.00001 lb VOC/lb solids. The requirements to approve the use of other VOC emission factors are defined elsewhere in this permit. W = total weight of VOC shipped in waste, in tons/month; G# = total weight of each VOC-containing waste material shipped based on daily usage logs, in tons/month. If the Permittee chooses to not take credit for waste shipments, this parameter would be zero; and H# = weight percent of VOC in G#, defined in Appendix B and the Waste Credit requirement in COMG 1, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.2.12	1,2-(trans-) Dichloroethylene: Daily Calculations. The Permittee shall calculate 1,2-(trans-) Dichloroethylene emissions using the following equations: $\text{1,2-(trans-) Dichloroethylene (tons/day)} = T - X$ $T = (I1 \times J1) + (I2 \times J2) + (I3 \times J3) + \dots + K$ $X = (M1 \times N1) + (M2 \times N2) + (M3 \times N3) + \dots$ Where: T = total weight of 1,2-(trans-) Dichloroethylene used, in tons/day; I# = total weight of 1,2-(trans-) Dichloroethylene VOC-containing material used in COMG 1 based on daily usage logs, in tons/day. The 1,2-(trans-) Dichloroethylene VOC-containing material weight must

Requirement number	Requirement and citation
	include the initial weight of prepared coating in each coater-specific tank as well as the weight of 1,2-(trans-) Dichloroethylene VOC solvent added to each tank to thin out the coating; J# = weight percent of VOC in I# defined in Appendix B, as a fraction. The weight percent for the formulation allowed by this permit is 0.90 lb 1,2-(trans-) Dichloroethylene/lb solvent. The requirements to approve the use of other formulations and emission factors are defined elsewhere in this permit; X = total weight of 1,2-(trans-) Dichloroethylene shipped in waste, in tons/day; M# = total weight of 1,2-(trans-) Dichloroethylene VOC-containing material shipped in waste based on daily usage logs, in tons/day. If the Permittee chooses to not take credit for waste shipments, this parameter would be zero; N# = weight percent of 1,2-(trans-) Dichloroethylene in M#, as a fraction, as determined in Appendix B and by the Waste Credit requirements elsewhere in this permit; K = default daily uncaptured 1,2-(trans-) Dichloroethylene emissions based on measured indoor air concentrations of non-coating rooms, in tons/day, as described elsewhere in this permit. The daily calculations must include all significant digits as described in in 5.2.14. [Minn. R. 7007.0800, subps. 4-5, Minn. Stat. 116.385, subd. 3]
5.2.13	Daily Reporting: The Permittee shall continue to comply with the requirements of all effective enforcement documents until those documents are terminated by MPCA. As of issuance of Permit No. 12300341-101, these enforcement documents include the Stipulation Agreement executed March 1, 2019, and the Administrative Order signed January 17, 2020. These documents are included for reference as Attachments 5 and 6 to the TSD of this permit, respectively. [Minn. R. 7007.0800, subp. 2(A) & (B)]
5.2.14	1,2-(trans-) Dichloroethylene: Default Uncaptured Emission Rate. The Default Uncaptured Emission Rate to be used based on measured indoor air concentrations in non-coating rooms for the purposes of calculating total daily 1,2-(trans-) Dichloroethylene emissions are defined as follows: Default 1,2-(trans-) Dichloroethylene Uncaptured Emission Rate = 0.003104 tons/day The Permittee shall add this value (K) to the total daily 1,2-(trans-) Dichloroethylene emissions following the requirements of this permit and must include all significant digits. The Permittee may change the default uncaptured emission rate following the requirements specified in this permit and the procedures in Appendix B. [Minn. R. 7007.0800, subps. 4-5, Minn. Stat. 116.385, subd. 3]
5.2.15	1,2-(trans-) Dichloroethylene: Changes to Default Uncaptured Emission Rates. The Permittee may change the default uncaptured emission rate based on approved indoor testing of non-coating rooms at the facility identified in Appendix B. The revised emission rates shall be calculated as follows: $DFE = (Y1 \times Z1) + (Y2 \times Z2) + (Y3 \times Z3) + \dots$ where: DFE = Default Uncaptured Emission rate of 1,2-(trans-) Dichloroethylene, in tons/day; Y# = concentration of 1,2-(trans-) Dichloroethylene measured in each non-coating room at the facility described in Appendix B, in tons/actual cubic foot; and Z# = total actual flow rate of all vents associated with each non-coating room at the facility, in actual cubic feet/day. [Minn. R. 7007.0800, subps. 4-5, Minn. Stat. 116.385, subd. 3]
5.2.16	1,2-(trans-) Dichloroethylene: Reconciliation of Predicted Stack Concentration and Continuous Emission Monitoring System (CEMS, EQUI 176) Readings. By 4:30pm on each day of operation, the Permittee shall calculate, record, and maintain a record of the following for the previous operating day:

Commented [A24]: Note: while the digital spreadsheet will allow for the use of 6 decimal places, the scale used in determining the amount of coating used is not this precise (its precision is 0.2 pounds). MPCA can expand the cells to see 6 decimal places, but the actual precision is 4 decimal places.

Commented [A25]: As noted in the Comment Letter, these documents should be terminated when the Permit is issued.

Commented [A26]: See comment on 5.2.12 regarding appropriate decimal places.

Requirement number	Requirement and citation
	<p>1) The predicted stack concentration of 1,2-(trans-) Dichloroethylene versus 1,2-(trans-) Dichloroethylene usage the following equation:</p> $y = 0.1295x + 49.162$ <p>Where:</p> <p>y = predicted 1,2-(trans-) Dichloroethylene stack concentration, in ppmv-wet, of Total Hydrocarbon Concentration as 1,2-(trans-) Dichloroethylene; x = 1,2-(trans-) Dichloroethylene usage, in pounds per day, from daily 1,2-(trans-) Dichloroethylene containing VOC coating and solvent usage records.</p> <p>AND</p> <p>2) The average daily concentration of the CEM (EQUI 176) measurements of Total Hydrocarbon Concentration, expressed as ppm-wet 1,2-(trans-) Dichloroethylene. The average daily concentration shall be calculated in the same manner it was calculated for the Total Hydrocarbon results submitted as required by the Administrative Order. The beginning of the daily period for this calculated average concentration must be aligned with the beginning of the corresponding coating operating day. The daily period for this calculated average concentration must be no less than 1425 minutes in total. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800 subp. 4(C) and (D), Minn. Stat. 116.385, subd. 3, Minn. Stat. 116.07, subd. 9(2)]</p>
5.2.17	<p>Reconciliation of Predicted Stack Concentration and Continuous Emissions Monitoring System (CEMS, EQUI 176) Readings Audit: If the calculated average daily concentration of the CEMS measurements for Total Hydrocarbon Concentration expressed as ppm-wet 1,2-(trans-) Dichloroethylene exceeds the predicted 1,2-(trans-) Dichloroethylene stack concentration for that day, the Permittee shall immediately audit the 1,2-(trans-) Dichloroethylene-containing material usage and inventory records to determine the cause of this discrepancy and shall report this as a deviation that triggers the audit requirement. If an average daily concentration of the CEMS measurements of Total Hydrocarbon Concentration expressed as ppm-wet 1,2-(trans-) Dichloroethylene exceeds the predicted 1,2-(trans-) Dichloroethylene stack concentration for that day, this result in and of itself does not constitute an exceedance of the 1, 2-(trans-) Dichloroethylene emission limit defined elsewhere in this permit. If an average daily concentration of the CEMS measurements of Total Hydrocarbon Concentration expressed as ppm-wet 1,2-(trans-) Dichloroethylene exceeds the predicted 1,2-(trans-) Dichloroethylene stack concentration for that day, the permittee shall implement needed corrections based on this review. The Permittee shall keep records of each calculation, whether a deviation that triggered the audit was observed, and whether a correction was made and how the correction was made. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800 subp. 4C and D, Minn. R. 7007.0800, subps. 4-6, Minn. Stat. 116.385, subd. 3, Minn. Stat. 116.07, subd. 9(2)]</p>
5.2.18	<p>Material Content. VOC and Solids (PM, PM<10 microns, and PM<2.5 microns) contents in coating materials shall be determined by the Safety Data Sheet (SDS) or the Material Safety Data Sheet (MSDS) provided by the supplier for each material used. If a material content range is given on the SDS or the MSDS, the highest number in the range shall be used in all compliance calculations. If information is provided in the Regulatory Section of the SDS, the highest number in the range of that section may be used. Other alternative methods approved by the MPCA may be used to determine the VOC and solids contents. The Commissioner reserves the right to require the Permittee to determine the VOC and solids contents of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for material content determination, the data obtained shall supersede the SDS or the MSDS. [Minn. R. 7007.0800, subps. 4-5]</p>

Commented [A27]: If the CEMS remains, the results need only be in ppmv-wet THC. The AO requirements need to be voided or the entire AO terminated as the AO requires a daily flow measurement and calculation of a lb/hr emission rate that is unnecessary, burdensome, and expensive.

Commented [A28]: The requirement to include 1425 minutes in a valid sample is too stringent. Pace Analytical has provided data reports since the AO and often have fewer than 1425 minutes in a sample, with no issues.

Commented [A29]: A concentration of the CEMS being higher than predicted is not in itself a deviation that implies any error or wrongdoing by the facility. Based on the way MPCA correlated the past CEMS vs. usage tracking, there is a 2.5% chance that any given measurement would be higher than expected.

Commented [A30]: As commented on the previous draft permit, the clause stating the Commissioner can require the Permittee to determine the VOC/solids content should be reserved for occasions when the SDS, MSDS, or information from the vendor are not available.

Requirement number	Requirement and citation
5.2.19	<p>Maximum Contents of Materials and Process Rate: The Permittee assumed certain worst-case contents of materials and process rates when determining the short-term potential to emit of units in COMG 1. These assumptions are listed in Appendix B and Appendix C of this permit. Increasing the process rate or changing to a material that has a higher content of any of the given pollutants, or an addition of a pollutant not listed in Appendix B or Appendix C, is considered a change in method of operation that must be evaluated under Minn. R. 7007.1200, subp. 3 to determine if a permit amendment or notification is required under Minn. R. 7007.1150. [Minn. R. 7005.0100, subp. 35a]</p>
5.2.20	<p>Waste Credit for Calculation of VOC Emissions: If the Permittee elects to obtain credit for VOC shipped in waste materials, the Permittee shall either use item 1 or 2 to determine the VOC content for each credited shipment.</p> <p>1) The Permittee shall analyze a representative composite sample of each waste shipment to determine the weight content of VOC, excluding water following the procedures in Appendix B.</p> <p>2) The Permittee may use supplier data for raw materials to determine the VOC contents of each waste shipment, using the same content data used to determine the content of raw materials. If the waste contains several materials, the content of mixed waste shall be assumed to be the lowest VOC content of any of the materials. [Minn. R. 7007.0800, subps. 4-5]</p>
5.2.21	<p>Waste Credit for Calculation of 1,2-(trans-) Dichloroethylene Emissions: If the Permittee elects to obtain credit for 1,2-(trans-) Dichloroethylene shipped in waste materials, the Permittee shall determine the specific content of 1,2-(trans-) Dichloroethylene in waste material, in weight percent, following the analysis procedure and frequency requirements in Appendix B. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. Stat. 116.385, subd. 3, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.2.22	<p>Conversion of 1,2-(trans-) Dichloroethylene VOC Spray Coater(s) to 1,2-(trans-) Dichloroethylene VOC Dip/Drip Coater(s). The Permittee is authorized to modify existing spray 1,2-(trans-) Dichloroethylene VOC coaters to dip/drip application methods. A permit amendment may be needed if there is an increase of regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the converted coater(s) shall comply with all requirements for 1,2-(trans-) Dichloroethylene VOC coaters described under COMG 1 and COMG 5, and be removed from COMG 4 and COMG 14 for compliance demonstration purposes. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]</p>
5.2.23	<p>Conversion of 1,2-(trans-) Dichloroethylene VOC Spray Coater(s) to Water-Based Spray Coater(s). The Permittee is authorized to modify existing spray 1,2-(trans-) Dichloroethylene VOC coaters to use Tacolyn 3570 water-based coating applied by spray methods. A permit amendment may be needed if there is an increase of regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the converted coater(s) shall comply with all requirements for water-based coaters described under COMG 1, COMG 5, and COMG 8, and COMG 14, and be removed from COMG 4 for compliance demonstration purposes. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]</p>

Commented [A31]: Replace "each" with "a representative."

Requirement number	Requirement and citation
5.2.24	Conversion of 1,2-(trans-) Dichloroethylene VOC Spray Coater(s) to Water-Based Dip/Drip Coater(s). The Permittee is authorized to modify existing spray 1,2-(trans-) Dichloroethylene VOC coaters to use Tacolyn 3570 water-based coatings applied by dip/drip methods. A permit amendment may be needed if there is an increase of regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the converted coater(s) shall comply with all requirements for water-based coaters described under COMG 1 and be removed from COMG 4, COMG 5, and COMG 14 for compliance demonstration purposes. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.2.25	Conversion of 1,2-(trans-) Dichloroethylene VOC Spray Coater(s) to Ultraviolet (UV) Spray Coater(s). The Permittee is authorized to modify existing 1,2-(trans-) Dichloroethylene VOC spray coaters to use the WGCS 300 UV spray coating method. A permit amendment may be needed if there is an increase of regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the converted coater(s) shall comply with all requirements for UV coaters described under COMG 1, COMG 2, COMG 5, and COMG 14, and shall be removed from COMG 4 for compliance demonstration purposes. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.2.26	Conversion of 1,2-(trans-) Dichloroethylene VOC Dip/Drip Coater(s) to Water-Based Spray Coater(s). The Permittee is authorized to modify existing 1,2-(trans-) Dichloroethylene VOC dip/drip coaters to use Tacolyn 3570 water-based coatings applied by spray methods. A permit amendment may be needed if there is an increase of regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the converted coater(s) shall comply with all requirements for water-based coaters described under COMG 1, COMG 5, COMG 8, and COMG 14 for compliance demonstration purposes. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.2.27	Conversion of 1,2-(trans-) Dichloroethylene VOC Dip/Drip Coater(s) to Water-Based Dip/Drip Coater(s). The Permittee is authorized to modify existing 1,2-(trans-) Dichloroethylene VOC dip/drip coaters to use Tacolyn 3570 water-based coatings applied by dip/drip methods. A permit amendment may be needed if there is an increase of regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the converted coater(s) shall comply with all requirements for water-based coaters described under COMG 1 and be removed from COMG 5 for compliance

Requirement number	Requirement and citation
	demonstration purposes. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.2.28	Conversion of 1,2-(trans-) Dichloroethylene VOC Dip/Drip Coater(s) to Ultraviolet (UV) Spray Coater(s). The Permittee is authorized to modify existing 1,2-(trans-) Dichloroethylene VOC dip/drip coaters to use the WGCS 300 UV spray coating method. A permit amendment may be needed if there is an increase of regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the converted coater(s) shall comply with all requirements for UV coaters described under COMG 1, COMG 2, COMG 5, and COMG 14 for compliance demonstration purposes. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.2.29	<p>The Permittee is prohibited from making any of the following changes without a major permit amendment to extend enforcement of the existing emission limit caps and emission calculation methods. The Permittee may submit to MPCA an applicability determination to confirm the need for a major amendment when planning any of the modifications listed below:</p> <ol style="list-style-type: none"> 1) Converting any type of existing 1,2-(trans-) Dichloroethylene VOC coater to any type of 1,2-(trans-) Dichloroethylene VOC coater in a manner that increases potential emissions of any pollutant; 2) Replacing any type of existing 1,2-(trans-) Dichloroethylene VOC coater with any type of new 1,2-(trans-) Dichloroethylene VOC coater that results in increased emissions; 3) Adding any type of new VOC coater; 4) Converting any type of strictly water-based coater to any type of strictly VOC coater. This does not apply to existing hybrid coaters identified in Appendix B as able to apply water-based and/or VOC coatings; 5) Replacing any type of strictly water-based coater with any type of strictly VOC coater. This does not apply to existing hybrid coaters identified in Appendix B as able to apply water-based and/or 1,2-(trans-) Dichloroethylene VOC coatings; 6) Converting any type of existing UV coater to any type of VOC coater; or 7) Replacing any type of existing UV coater with any type of VOC coater. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.2.30	Conversion of Water-Based Spray Coater(s) to Water-Based Dip/Drip Coater(s). The Permittee is authorized to modify existing water-based spray coaters to use Tacolyn 3570 water-based coatings applied by dip/drip methods. A permit amendment may be needed if there is an increase of regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the converted coater(s) shall comply with all requirements for water-based coaters described under COMG 1 and be removed from COMG 8 and COMG 14 for compliance demonstration purposes. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.2.31	Conversion of Water-Based Dip/Drip Coaters to Water-Based Spray Coaters. The Permittee is authorized to modify existing water-based dip/drip coaters to use Tacolyn 3570 water-based coatings

Requirement number	Requirement and citation
	<p>applied by spray methods. A permit amendment may be needed if there is an increase of regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the converted coater(s) shall comply with all requirements for water-based coaters described under COMG 1, COMG 5, COMG 8, and COMG 14 for compliance demonstration purposes. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]</p>
5.2.32	<p>Conversion of Water-Based Spray Coater(s) to Ultraviolet (UV) Spray Coater(s). The Permittee is authorized to modify water-based spray coaters to use the WGCS 300 UV spray coating method. A permit amendment may be needed if there is an increase of regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the converted coater(s) shall comply with all requirements for UV coaters described under COMG 1, COMG 2, COMG 5, and COMG 14, and be removed from COMG 8 for compliance demonstration purposes. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]</p>
5.2.33	<p>Conversion of Water-Based Dip/Drip Coater(s) to Ultraviolet (UV) Spray Coater(s). The Permittee is authorized to modify water-based dip/drip coaters to use the WGCS 300 UV spray coating method. A permit amendment may be needed if there is an increase of regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the converted coater(s) shall comply with all requirements for UV coaters described under COMG 1, COMG 2, COMG 5, and COMG 14 for compliance demonstration purposes. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]</p>
5.2.34	<p>Replacement of Existing Water-Based Spray Coater(s) and Addition of New Water-Based Spray Coater(s). The Permittee is authorized to replace existing water-based spray coaters with new water-based spray coaters, and add additional new water-based spray coaters. A permit amendment may be needed if there is an increase of regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the new coater(s) shall comply with all requirements for water-based spray coaters described under COMG 1, COMG 5, COMG 8, and COMG 14 for compliance demonstration purposes. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]</p>
5.2.35	<p>Replacement of Existing Water-Based Dip/Drip Coater(s). Change of Location of Water-Based Dip/Drip Coater(s) Outside the Coating Rooms Exhausting Through STRU 73, and Addition of New Water-Based Dip/Drip Coater(s). The Permittee is authorized to replace existing water-based dip/drip coaters with</p>

Requirement number	Requirement and citation
	<p>new water-based dip/drip coaters, or change the location of existing water-based dip/drip coaters to a location outside the coating rooms exhausting through STRU 73, or install new water-based dip/drip coaters. A permit amendment may be needed if there is an increase of regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the new coater(s) shall comply with all requirements for water-based coaters described under COMG 1 for compliance demonstration purposes. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]</p>
5.2.36	<p>Conversion of Ultraviolet (UV) Spray Coater(s) to Water-Based Spray Coater(s). The Permittee is authorized to modify existing UV coaters to use water-based coaters with spray application methods. A permit amendment may be needed if there is an increase of regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the converted coater(s) shall comply with all requirements for water-based coaters described under COMG 1, COMG 5, COMG 8, and COMG 14, and be removed from COMG 2 for compliance demonstration purposes. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]</p>
5.2.37	<p>Conversion of Ultraviolet (UV) Spray Coater(s) to Water-Based Dip/Drip Coater(s). The Permittee is authorized to modify existing UV coaters to use water-based coaters with dip/drip application methods. A permit amendment may be needed if there is an increase of regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the converted coater(s) shall comply with all requirements for water-based coaters described under COMG 1, and be removed from COMG 2, COMG 5, and COMG 14 for compliance demonstration purposes. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]</p>
5.2.38	<p>Replacement of Existing UV Spray Coater(s) and Addition of New UV Spray Coater(s). The Permittee is authorized to replace existing UV coaters with new UV coaters, and add additional new UV coaters. A permit amendment may be needed if there is an increase of regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the new coater(s) shall comply with all requirements for UV coaters described under COMG 1, COMG 2, COMG 5, and COMG 14 for compliance demonstration purposes. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]</p>

Requirement number	Requirement and citation
5.2.39	Replacement of Existing 1,2-(trans-) Dichloroethylene VOC Dip/Drip Coater(s). The Permittee is authorized to replace existing 1,2-(trans-) Dichloroethylene VOC dip/drip coater with new 1,2-(trans-) Dichloroethylene VOC dip/drip coater of equal or lower design capacity so that there is no increase of potential emissions of t-DCE. A permit amendment may be needed if there is an increase of other regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the new coater(s) shall comply with all requirements for 1,2-(trans-) Dichloroethylene VOC Dip/Drip coaters described under COMG 1 and COMG 5 for compliance demonstration purposes. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.385, subd. 3]
5.2.40	Replacement of Existing 1,2-(trans-) Dichloroethylene VOC spray Coater(s). The Permittee is authorized to replace existing 1,2-(trans-) Dichloroethylene VOC spray coater with new 1,2-(trans-) Dichloroethylene VOC dip/drip coater of equal or lower design capacity so that there is no increase of potential emissions of t-DCE or PM10 or PM2.5. A permit amendment may be needed if there is an increase of other regulated pollutants based on the design capacity of the modified equipment, the change will be subject to a newly applicable requirement, or there are revisions to limits or the monitoring and recordkeeping in this permit. If a permit amendment is required for this change, the Permittee shall apply for and obtain the appropriate permit amendment before making the change, as applicable. If no permit amendment is needed, the Permittee shall notify the Agency within 30 days before the change is implemented as required elsewhere in this permit. On the first day of operation, the new coater(s) shall comply with all requirements for 1,2-(trans-) Dichloroethylene VOC spray coaters described under COMG 1, COMG 5, COMG 4 and COMG 14 for compliance demonstration purposes. [Minn. R. 7007.0800, subp. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.2.41	VOC Solvent Formulation: The Permittee shall limit 1,2-(trans-) Dichloroethylene VOC solvent use to the formulation described in Appendix B of this permit. For authorization to use alternative VOC solvents with formulations that increase emissions of chemicals identified under the Toxicological or Ecological Information section of the Safety Data Sheet, or that add new chemicals not identified in the Toxicological or Ecological Information section of the Safety Data Sheet, or that increase the 1,2-(trans-) Dichloroethylene VOC content above 90 percent (by weight), the Permittee shall submit a major amendment. For authorization to use alternative that substitute for 1,2-(trans-) Dichloroethylene VOC solvents, the permittee shall submit revised dispersion modeling and a revised Air Emissions Risk Analysis (AERA) that includes any alternative VOC solvent following procedures as required under Minn. R. 7007.1500. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.2.42	Water-Based Coating Formulation: The Permittee shall limit use of water-based coating to the formulation described in Appendix B of this permit. For authorization to use other water-based coatings with formulations that increase emissions of any chemical identified under the Toxicological or Ecological Information section of the Safety Data Sheet, or that add new chemicals not identified in the Toxicological or Ecological Information section of the Safety Data Sheet, the Permittee shall submit a major amendment following procedures as required under Minn. R. 7007.1500. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.2.43	Ultraviolet (UV) Coating Formulation: The Permittee shall limit use of UV coating to the formulation described in Appendix B of this permit. For authorization to use other UV coatings with formulations that increase emissions of any chemical identified under the Toxicological or Ecological Information section of the Safety Data Sheet, or that add new chemicals not identified in the Toxicological or

Commented [A32]: 5.2.41 needs to consider alternative formulations that have similar TDCE content to the current formulation (90% TDCE).

Requirement number	Requirement and citation
	Ecological Information section of the Safety Data Sheet, the Permittee shall submit a major amendment following procedures as required under Minn. R. 7007.1500. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.2.44	The Permittee is prohibited from using any coating that contains any hazardous air pollutant (HAP), including the target HAPs as defined under 40 CFR Section 63.11180. The Permittee shall keep records that describe the HAP content in each coating used based on manufacturing data or coating analysis as prescribed in Appendix B. [Minn. R. 7007.0800, subp. 2(A)]
5.2.45	VOC Coater Installation Requirements: The Permittee shall install and maintain each VOC coater to meet the following requirements: 1) Non-table top coaters shall be fitted with a stainless steel catch pan designed to catch and minimize spills of coating material and any other contaminants associated with the coating process; 2) Table-top coaters shall be placed in a catch pan or other secondary containment vessel designed to catch and minimize spills of coating material and any other contaminants associated with the coating process; and 3) Non-table top coaters shall be enclosed on all sides, including the top. Concrete walls may not be utilized as part of the coater enclosure. [Minn. R. 7007.0800, subp. 2(A) & (B)]
5.2.46	Battery Terminal Post Coaters: Daily Maintenance. At the end of each shift on each operating day, the Permittee shall inspect each VOC, water-based, and UV coater in COMG 1 for coating spills and other materials in coater catch pans, secondary containment, and/or the floor. The Permittee shall clean and dispose of any coating material, hazardous waste, or other hazardous substance discovered in coater catch pans, secondary containment, or the floor in accordance with applicable state and local hazardous waste, solid waste, recycling and reuse regulations, and the material handling recommendations from the manufacturer of the coatings and solvents used. The Permittee shall keep records of coaters cleaned and corrective actions taken to prevent spills. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. ch. 7045]
5.2.47	Coating Transfer: The Permittee shall perform all transfers of VOC solvent and VOC-containing materials, including mixing of coating formulations, inside a coating room meeting the requirements of COMG 5. Transfer of VOC-containing materials via open containers outside the coating room including, but not limited to buckets, beakers, etc., is prohibited. [Minn. R. 7007.0800, subp. 2(A) & (B)]
5.2.48	VOC-Containing Material Storage: The Permittee shall keep lids securely in place on all VOC-containing material storage and transfer containers while not in active use. [Minn. R. 7007.0800, subp. 2(A) & (B)]
COMG 2	PM10 and PM2.5: Limits and Compliance Requirements for Ultraviolet (UV) Battery Terminal Post Coaters
5.3.1	The Permittee shall install, operate, and maintain each ultraviolet (UV) battery terminal post coater subject to COMG 2 requirements inside a coating room meeting the requirements of COMG 5. This requirement does not apply to EQUI 82, EQUI 117, or EQUI 240. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.3.2	The Permittee shall vent emissions from each ultraviolet (UV) battery terminal post coater subject to COMG 2 requirements to control equipment meeting the requirements of COMG 14 whenever each ultraviolet (UV) battery terminal post coater operates. This requirement does not apply to EQUI 82, EQUI 117, or EQUI 240. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.3.3	Each ultraviolet (UV) battery terminal post coater subject to COMG 2 requirements is subject to the requirements in COMG 1 except as noted within COMG 1. [Minn. R. 7007.0800, subps. 2(A) & 2(B),

Commented [A33]: NESHAP HHHHHH is not applicable to the facility. Further, there are no HAPs in WG coating, certainly not Cr, Pb, Mn, Ni, or Cd.

Requirement number	Requirement and citation
	Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.3.4	Each ultraviolet (UV) battery terminal post coater operated at the facility is subject to the requirements in COMG 5. This requirement does not apply to EQUI 117 and EQUI 240. [Minn. R. 7007.0800, subp. 2(A) & 2(B), Minn. R. 7007.0800, subps. 4-5, Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.3.5	The Permittee is prohibited from using any coating that contains any hazardous air pollutant (HAP), including the target HAPs as defined under 40 CFR Section 63.11180. [Minn. R. 7007.0800, subp. 2(A)]
5.3.6	Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain a record of the total quantity of each coating and other solids-containing material, including the solids content of each coating (as a mass fraction), used by each coater in COMG 2. This shall be based on written usage logs. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.3.7	<p>Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate, record, and maintain a record of the following for the previous operating day using the daily usage records:</p> <p>1) Total weight of UV coating used by each unit in COMG 2, in pounds/day; and 2) Daily average hourly emissions of PM10 and PM2.5 from all coaters in COMG 2 as determined elsewhere in this permit, in pounds/hour.</p> <p>This record shall also include solids contents of each material as determined by the Material Content requirement of this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.3.8	<p>PM < 10 micron: Daily Calculations. The Permittee shall calculate PM10 emissions from COMG 2 using the following equations: $PM10UV = [TPM10UV \text{ (uncontrolled)} + TPM10UV \text{ (controlled)}] / 24$ $TPM10UV \text{ (uncontrolled)} = [(KUV1 \times LUV1) + (KUV2 \times LUV2) + (KUV3 \times LUV3)]$ $TPM10UV \text{ (controlled)} = [(KUV1 \times LUV1) + (KUV2 \times LUV2) + (KUV3 \times LUV3)] \times (1-CE1)$</p> <p>where:</p> <p>PM10UV = daily average PM10 emissions from COMG 2, in pounds/hour; TPM10UV = total daily PM10 emissions from each EQUI in COMG 2, in pounds/day; KUV# = total weight of coating used in COMG 2 based on daily usage logs, in pounds/day; and LUV# = uncontrolled PM10 emission factor, in pounds PM10 per pound of coating, listed in Appendix B, as a fraction. Other uncontrolled emission factors allowed by this permit shall be based on the most recent MPCA-approved stack test results performed according to approved replicable methodology (ARM) requirements; and CE1 = minimum PM10 control efficiency required by COMG 14 for the coaters required to be controlled, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.3.9	<p>PM < 2.5 micron: Daily Calculations. The Permittee shall calculate PM2.5 emissions from COMG 2 using the following equations: $PM2.5UV = TPM2.5UV \text{ (uncontrolled)} + TPM2.5UV \text{ (controlled)} / 24$ $TPM2.5UV \text{ (uncontrolled)} = [(KUV1 \times PUV1) + (KUV2 \times PUV2) + (KUV3 \times PUV3)]$ $TPM2.5UV \text{ (controlled)} = [(KUV1 \times PUV1) + (KUV2 \times PUV2) + (KUV3 \times PUV3)] \times (1-CE2)$</p> <p>where:</p> <p>PM2.5UV = daily average PM2.5 emissions from COMG 2, in pounds/hour;</p>

Requirement number	Requirement and citation
	TPM2.5UV = total daily PM2.5 emissions from each EQUI in COMG 2, in pounds/day; KUV# = total weight of coating used in COMG 2 based on daily usage logs, in pounds/day; and PUV# = uncontrolled PM2.5 emission factor, in pounds PM2.5 per pound of coating, listed in Appendix B, as a fraction. Other uncontrolled emission factors allowed by this permit shall be based on the most recent MPCA-approved stack test results performed according to approved replicable methodology (ARM) requirements; and CE2 = minimum PM2.5 control efficiency required by COMG 14 for the coaters required to be controlled, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.3.10	Maximum Contents of Materials and Process Rate: The Permittee assumed certain worst-case contents of materials and process rates when determining the short-term potential to emit of units in COMG 2. These assumptions are listed in Appendix B of this permit. Increasing the process rate or changing to a material that has a higher content of any of the given pollutants, or an addition of a pollutant not listed in Appendix B, is considered a change in method of operation that must be evaluated under Minn. R. 7007.1200, subp. 3 to determine if a permit amendment or notification is required under Minn. R. 7007.1150. [Minn. R. 7005.0100, subp. 35a]
5.3.11	PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of coating in the performance test report required by Minn. R. 7017.2035, subp. 1. The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of coating, measured during the most recent MPCA-approved emission factor performance test. The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.3.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.3.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
5.3.14	PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of coating in the performance test report required by Minn. R. 7017.2035, subp. 1. The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of coating, measured during the most recent MPCA-approved emission factor performance test. The new emission factor used for calculating emissions determined using this Protocol shall be

Requirement number	Requirement and citation
	effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.3.15	PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.3.16	PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
COMG 4	PM10 and PM2.5: Limits and Compliance Requirements for VOC Spray Battery Terminal Post Coaters
5.4.1	The Permittee shall install, operate, and maintain each VOC spray battery terminal post coater subject to COMG 4 requirements inside a coating room meeting the requirements of COMG 5. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.4.2	The Permittee shall vent emissions from each VOC spray battery terminal post coater subject to COMG 4 requirements to control equipment meeting the requirements of COMG 14 whenever each VOC spray battery terminal post coater operates. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.4.3	Each VOC spray battery terminal post coater subject to COMG 4 requirements is subject to the requirements in COMG 1. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.4.4	The Permittee is prohibited from using any coating that contains any hazardous air pollutant (HAP), including the target HAPs as defined under 40 CFR Section 63.11180. [Minn. R. 7007.0800, subp. 2(A)]
5.4.5	Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain a record of the total quantity of each coating and other solids-containing material, including the solids content of each coating (as a mass fraction), used by each coater in COMG 4. This shall be based on written usage logs. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.4.6	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate, record, and maintain a record of the following for the previous operating day using the daily usage records: 1) Total weight of VOC coating used by each unit in COMG 4, in pounds/day; and 2) Daily average hourly emissions of PM10 and PM2.5 from all coaters in COMG 4 as determined elsewhere in this permit, in pounds/hour. This record shall also include solids contents of each material as determined by the Material Content requirement of this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.4.7	PM < 10 micron: Daily Calculations. The Permittee shall calculate PM10 emissions from COMG 4 using the following equations: $PM10VOC = \frac{TPM10VOC}{24}$ $TPM10VOC = [(IVOC1 \times JVOC1) + (IVOC2 \times JVOC2) + (IVOC3 \times JVOC3)] \times (1-TE) \times (1-CE1)$ where: PM10VOC = daily average PM10 emissions from COMG 4, in pounds/hour; TPM10VOC = total daily PM10 emissions from each EQUI in COMG 4, in pounds/day;

Requirement number	Requirement and citation
	IVOC# = total weight of coating used in COMG 4 based on daily usage logs, in pounds/day; and JVOC# = solids content of coating used in IVOC#, in weight percent; TE = minimum transfer efficiency allowed by the permit as of permit issuance (65 percent). Other transfer efficiencies allowed by this permit shall be based on the most recent MPCA-approved stack test results according to approved replicable methodology (ARM) requirements; and CE1 = minimum PM10 control efficiency required by COMG 14, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.4.8	PM < 2.5 micron: Daily Calculations. The Permittee shall calculate PM2.5 emissions from COMG 4 using the following equations: $PM2.5VOC = TPM2.5VOC/24$ $TPM2.5VOC = [(IVOC1 \times JVOC1) + (IVOC2 \times JVOC2) + (IVOC3 \times JVOC3)] \times (1-TE) \times (1-CE2)$ where: PM2.5VOC = daily average PM10 emissions from COMG 4, in pounds/hour; TPM2.5VOC = total daily PM2.5 emissions from each EQUI in COMG 4, in pounds/day; IVOC# = total weight of coating used in COMG 4 based on daily usage logs, in pounds/day; and JVOC# = solids content of coating used in IVOC#, in weight percent; TE = minimum transfer efficiency allowed by the permit as of permit issuance (65 percent). Other transfer efficiencies allowed by this permit shall be based on the most recent MPCA-approved stack test results according to approved replicable methodology (ARM) requirements; and CE2 = minimum PM2.5 control efficiency required by COMG 14, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.4.9	Material Content. Solids (PM, PM<10 microns, and PM<2.5 microns) contents in coatings and other materials used in COMG 4 shall be determined by the Safety Data Sheet (SDS) or the Material Safety Data Sheet (MSDS) provided by the supplier for each material used. If a material content range is given on the SDS or the MSDS, the highest number in the range shall be used in all compliance calculations. If there is information provided in the Regulatory Section of the SDS, the highest number in the range of that section may be used. Other alternative methods approved by the MPCA may be used to determine the solids content. The Commissioner reserves the right to require the Permittee to determine the solids content of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for material content determination, the data obtained shall supersede the SDS or the MSDS. [Minn. R. 7007.0800, subp. 4-5]
5.4.10	Maximum Contents of Materials and Process Rate: The Permittee assumed certain worst-case contents of materials and process rates when determining the short-term potential to emit of units in COMG 4. These assumptions are listed in Appendix B of this permit. Increasing the process rate or changing to a material that has a higher content of any of the given pollutants, or an addition of a pollutant not listed in Appendix B, is considered a change in method of operation that must be evaluated under Minn. R. 7007.1200, subp. 3 to determine if a permit amendment or notification is required under Minn. R. 7007.1150. [Minn. R. 7005.0100, subp. 35a]
5.4.11	Transfer efficiency for PM < 10 micron: Protocol for Re-Setting the Transfer efficiency Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission rates in pound PM10 per hour and transfer efficiency in pound PM10 per pound of solids (as applied) as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per hour and pound of coating solids as applied in the performance test report required by Minn. R. 7017.2035, subp. 1.

Requirement number	Requirement and citation
	<p>The transfer efficiency for PM < 10 micron used for calculating emissions shall be re-set to the 3-hour average transfer efficiency in pound PM10 per pound of coating solids as applied, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new transfer efficiency for PM < 10 micron: used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subp. 2(A) & (B) , Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.4.12	<p>Transfer efficiency for PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Transfer efficiency for PM < 10 micron Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.4.13	<p>Transfer efficiency for PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.4.14	<p>Transfer efficiency for PM < 2.5 micron: Protocol for Re-Setting the Transfer efficiency Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission rates in pound PM2.5 per hour and transfer efficiency in pound PM2.5 per pound of solids (as applied) as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per hour and pound of coating solids as applied in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The transfer efficiency for PM < 2.5 micron used for calculating emissions shall be re-set to the 3-hour average transfer efficiency in pound PM2.5 per pound of coating solids as applied, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new transfer efficiency for PM < 2.5 micron: used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.4.15	<p>Transfer efficiency for PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Transfer efficiency for PM < 2.5 micron Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.4.16	<p>Transfer efficiency for PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
COMG 5	Permanent Total Enclosure Requirements: Coating Rooms
5.5.1	<p>The Permittee shall limit Coating Room Pressure Drop <= -0.007 inches of water, as established in Method 204 of appendix M to 40 CFR part 51. Pressure drop across the established enclosure shall be monitored at all times as described elsewhere in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]</p>

Requirement number	Requirement and citation
5.5.2	The Permittee shall vent emissions from each EQUI subject to COMG 5 requirements to a stack/vent meeting the requirements of STRU 73 whenever each EQUI in COMG 5 operates. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.5.3	The Permittee shall operate and maintain each individual coating room the North Building as permanent total enclosures that meet the criteria of Method 204 of appendix M, 40 CFR pt. 51. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.5.4	Coating Room Pressure Drop Continuous Monitoring Devices: The Permittee shall install, operate, and maintain a pressure drop monitoring system (pressure drop gauge EQUI 169, EQUI 170 and EQUI 171 and building management system EQUI 168) for each enclosure meeting the following requirements and maintain records of compliance with these requirements: (1) Complete a minimum of one cycle of operation for each successive 15-minute period having a minimum of four equally spaced successive cycles of CPMS operation in one hour; (2) Determine the average of all recorded readings for each successive 3-hour period of the emission capture system and add-on control device operation; (3) Record the results of each inspection, calibration, and validation check of the pressure drop gauge; (4) Maintain the pressure drop gauge at all times and have available necessary parts for routine repairs of the monitoring equipment; (5) Operate the pressure drop gauge and collect pressure drop data at all times that a coating operation is operating, except during monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, if applicable, calibration checks and required zero and span adjustments); (6) Do not use data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities when calculating data averages. Use all the data collected during all other periods in calculating the data averages for determining compliance with the emission capture system and add-on control device operating limits; (7) Locate the pressure drop gauge(s) in or as close to a position that provides a representative measurement of the pressure drop across each monitored enclosure (each coating room); (8) Use a pressure drop gauge with an accuracy of at least five percent of the minimum pressure drop to be maintained. (9) Perform an initial calibration of the pressure drop gauge according to the manufacturer's requirements; (10) Conduct a validation check before initial operation or upon relocation or replacement of a pressure drop gauge. Validation checks include comparison of pressure drop gauge values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources; (11) Conduct accuracy audits every quarter and after every deviation. Accuracy audits include comparison of pressure drop gauge values to calibrated pressure measurement devices or to pressure simulation using calibrated pressure sources; (12) Perform monthly leak checks on pressure connections. A pressure of at least 1.0 inches of water column to the connection must yield a stable sensor result for at least 15 seconds; and (13) Perform a visual inspection of the pressure drop gauge at least monthly if there is no redundant pressure drop gauge. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.5.5	Coating Room Pressure Alarm: The Permittee shall install, operate, and maintain an alarm that triggers when the pressure drop set point is exceeded. The set point at which the alarm triggers shall be set such that the alarm sounds when the pressure drop limit established in this permit is not met. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]

Requirement number	Requirement and citation
5.5.6	Coating Room Airflow Direction: The Permittee shall maintain airflow into the Coating Room enclosure at all times. If airflow into the enclosure is not maintained, coating operations in the Coating Room shall be shut down until airflow direction into the enclosure is restored and shall be reported as a deviation. The Permittee shall document and keep records of all deviations, including the date of malfunction, steps taken to restore airflow direction into the enclosure, and the date operation continued. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.5.7	Coating Room Negative Pressure Monitoring: The Permittee shall continuously monitor the pressure drop across the enclosure of each coating room established during the most-recent performance test following Method 204 of appendix M to 40 CFR Part 51. If it is discovered that negative pressure is not being maintained, either by inspection or the alarm is sounded, coating operations in the coating room shall be shut down until a negative pressure state is restored. Each violation of the pressure drop limit shall be reported as a deviation. The Permittee shall document and keep records of all deviations, including the date of malfunction, steps taken to restore the minimum negative pressure, and the date operation continued. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.5.8	The Permittee shall install and maintain a Retro-Coat Vapor Intrusion System on the floor surfaces of each coating room in COMG 5 where t-DCE VOC coaters operate. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.5.9	Daily Inspection: On each day of operation, the Permittee shall inspect the floor of each coating room where t-DCE VOC coaters operate to check for degradation of the Retro-Coat Vapor Intrusion Coating System and do the following (where applicable): 1) If degradation is discovered, the Permittee shall immediately resolve the degradation. 2) If the degradation is not resolved within 24 hours, the Permittee shall immediately cease VOC-coating operations in that coating room until the degradation is corrected. 3) Notify the MPCA immediately upon ceasing VOC coating operations due to degradation on the Retro-Coat Vapor Intrusion System. 4) Photographs of all degradation areas shall be taken before and after corrective actions are taken. Photographs shall be retained in Facility records. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
5.5.10	Daily Inspection: On each day of operation, the Permittee shall inspect the and record the door status and verify the alarm system is operating with a set point at a minimum pressure drop of 0.007 inches of water for each coating room. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5, Minn. Stat. 116.07, subd. 4a(a), Minn. Stat. 116.385, subd. 3]
COMG 6	Indirect Heating Equipment Rule Requirements
5.6.1	Filterable Particulate Matter <= 0.40 pounds per million Btu heat input. The potential to emit from the unit is 0.0076 lb/MMBtu due to equipment design and allowable fuels. This limit applies individually to each unit in COMG 6. [Minn. R. 7011.0515, subp. 1]
5.6.2	Opacity <= 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. [Minn. R. 7011.0515, subp. 2]
5.6.3	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
5.6.4	The Permittee shall keep records of fuel purchases showing fuel types for the purpose of reporting emissions to the annual emissions inventory. [Minn. R. 7007.0800, subp. 5, Minn. R. 7019.3000-7019.3100]
COMG 7	Industrial Process Equipment Rule Requirements

Requirement number	Requirement and citation
5.7.1	Particulate Matter <= 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. This limit applies individually to each unit in COMG 7. [Minn. R. 7011.0715, subp. 1(A)]
5.7.2	Opacity <= 20 percent opacity. This limit applies individually to each unit in COMG 7. [Minn. R. 7011.0715, subp. 1(B)]
COMG 8	PM10 and PM2.5: Limits and Compliance Requirements for Water-Based Spray Battery Terminal Post Coaters
5.8.1	The Permittee shall install, operate, and maintain each water-based spray battery terminal post coater subject to COMG 8 requirements inside a coating room meeting the requirements of COMG 5. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.8.2	The Permittee shall vent emissions from each water-based spray battery terminal post coater subject to COMG 8 requirements to control equipment meeting the requirements of COMG 14 whenever each water-based spray battery terminal post coater operates. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.8.3	Water-based Spray Battery Terminal Post Coater operated at the facility is subject to the requirements in COMG 1. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.8.4	The Permittee is prohibited from using any coating that contains any hazardous air pollutant (HAP), including the target HAPs as defined under 40 CFR Section 63.11180. [Minn. R. 7007.0800, subp. 2(A)]
5.8.5	Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain a record of the total quantity of each coating and other solids-containing material, including the solids content of each coating (as a mass fraction), used by each coater in COMG 8. This shall be based on written usage logs. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.8.6	Particulate Matter: Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate, record, and maintain a record of the following for the previous operating day using the daily usage records: 1) Total weight of water-based coating used by each unit in COMG 8, in pounds/day; and 2) Daily average hourly emissions of PM10 and PM2.5 from all water-based coaters in COMG 8 as determined elsewhere in this permit, in pounds/hour. This record shall also include solids contents of each material as determined by the Material Content requirement of this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.8.7	PM < 10 micron: Daily Calculations. The Permittee shall calculate PM10 emissions from COMG 8 using the following equations: $PM10WB = TPM10WB/24$ $TPM10WB = [(IWB1 \times JWB1) + (IWB2 \times JWB2) + (IWB3 \times JWB3)] \times (1-TE) \times (1-CE1)$ where: PM10WB = daily average PM10 emissions from COMG 8, in pounds/hour; TPM10WB = total daily PM10 emissions from each EQUI in COMG 8, in pounds/day; IWB# = total weight of coating used in COMG 8 based on daily usage logs, in pounds/day; JWB# = solids content of coating used in IWB#, in weight percent; TE = minimum transfer efficiency allowed by the permit as of permit issuance (65 percent). Other transfer efficiencies allowed by this permit shall be based on MPCA-approved stack test results according to approved replicable methodology (ARM) requirements; and

Requirement number	Requirement and citation
	CE1 = minimum PM10 control efficiency required by COMG 14, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.8.8	<p>PM < 2.5 micron: Daily Calculations. The Permittee shall calculate PM2.5 emissions from COMG 8 using the following equations: $PM2.5WB = TPM2.5WB/24$ $TPM2.5WB = [(IWB1 \times JWB1) + (IWB2 \times JWB2) + (IWB3 \times JWB3)] \times (1-TE) \times (1-CE2)$</p> <p>where:</p> <p>PM2.5WB = daily average PM2.5 emissions from COMG 8, in pounds/hour; TPM2.5WB = total daily PM2.5 emissions from each EQUI in COMG 8, in pounds/day; IWB# = total weight of coating used in COMG 8 based on daily usage logs, in pounds/day; JWB# = solids content of coating used in IWB#, in weight percent; TE = minimum transfer efficiency allowed by the permit as of permit issuance (65 percent). Other transfer efficiencies allowed by this permit shall be based on MPCA-approved stack test results according to approved replicable methodology (ARM) requirements; and CE2 = minimum PM2.5 control efficiency required by COMG 14, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.8.9	<p>Material Content. Solids (PM, PM<10 microns, and PM<2.5 microns) contents in coatings and other materials used in COMG 8 shall be determined by the Safety Data Sheet (SDS) or the Material Safety Data Sheet (MSDS) provided by the supplier for each material used. If a material content range is given on the SDS or the MSDS, the highest number in the range shall be used in all compliance calculations. If there is information provided in the Regulatory Section of the SDS, the highest number in the range of that section may be used. Other alternative methods approved by the MPCA may be used to determine the solids content. The Commissioner reserves the right to require the Permittee to determine the solids content of any material, according to EPA or ASTM reference methods. If an EPA or ASTM reference method is used for material content determination, the data obtained shall supersede the SDS or the MSDS. [Minn. R. 7007.0800, subp. 4-5]</p>
5.8.10	<p>Maximum Contents of Materials and Process Rate: The Permittee assumed certain worst-case contents of materials and process rates when determining the short-term potential to emit of units in COMG 8. These assumptions are listed in Appendix B of this permit. Increasing the process rate or changing to a material that has a higher content of any of the given pollutants, or an addition of a pollutant not listed in Appendix B, is considered a change in method of operation that must be evaluated under Minn. R. 7007.1200, subp. 3 to determine if a permit amendment or notification is required under Minn. R. 7007.1150. [Minn. R. 7005.0100, subp. 35a]</p>
5.8.11	<p>Transfer efficiency for PM < 10 micron: Protocol for Re-Setting the Transfer efficiency Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission rates in pound PM10 per hour and transfer efficiency in pound PM10 per pound of solids (as applied) as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per hour and pound of coating solids as applied in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The transfer efficiency for PM < 10 micron used for calculating emissions shall be re-set to the 3-hour average transfer efficiency in pound PM10 per pound of coating solids as applied, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new transfer efficiency for PM < 10 micron: used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the</p>

Requirement number	Requirement and citation
	test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.8.12	Transfer efficiency for PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Transfer efficiency for PM < 10 micron Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.8.13	Transfer efficiency for PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
5.8.14	<p>Transfer efficiency for PM < 2.5 micron: Protocol for Re-Setting the Transfer efficiency Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission rates in pound PM2.5 per hour and transfer efficiency in pound PM2.5 per pound of solids (as applied) as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per hour and pound of coating solids as applied in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The transfer efficiency for PM < 2.5 micron used for calculating emissions shall be re-set to the 3-hour average transfer efficiency in pound PM2.5 per pound of coating solids as applied, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new transfer efficiency for PM < 2.5 micron: used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.8.15	Transfer efficiency for PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Transfer efficiency for PM < 2.5 micron Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.8.16	Transfer efficiency for PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
COMG 9	Sub-Slab Vapor Mitigation System: Operation Requirements
5.9.1	The Permittee shall vent emissions from EQUI 167 to a stack/vent meeting the requirements of STRU 41 whenever EQUI 167 operates. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.9.2	The Permittee shall operate and maintain a Sub-Slab Depressurization and Solvent Vapor Extraction system (EQUI 167), and vent emissions to two 2,000-pound granulated activated carbon (GAC) canisters connected in-series (TREA 50 and TREA 51) such that all solvent vapor emissions from beneath the facility floor are captured and vented through the remediation stack (STRU 41) following the requirements of this permit. The requirement to vent emissions from EQUI 167 to TREA 50 and 51 terminates when the MPCA Remediation Division approves the removal of TREA 50 and TREA 51 in writing. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]

Requirement number	Requirement and citation
5.9.3	<p>Sampling Locations: The Permittee shall install and maintain gas sampling ports at the following locations required by the MPCA Remediation Division. This includes but is not limited to sampling ports at the inlet side, in between and at the effluent side of the two carbon canisters controlling emissions from EQUI 167. The requirement to install and maintain gas sampling ports at these locations terminates when the MPCA Remediation Division approves the removal of TREA 50 and TREA 51 in writing. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>
5.9.4	<p>The Permittee shall obtain a gas sample from the Solvent Vapor Extraction system at the locations and with the frequency required by the MPCA Remediation Division. If sampling is required, the Permittee shall send each sample to a third-party analytical laboratory for analysis following EPA Method TO-15. The requirement to conduct quarterly sampling of emissions from Solvent Vapor Extraction system terminates when the MPCA Remediation Division approves the removal of TREA 50 and TREA 51 in writing. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>
5.9.5	<p>Sample Analytical Results Recordkeeping: If sampling and analysis is required by the MPCA Remediation Division, the Permittee shall maintain a record of the analytical test results on each required gas sample, including the date of the test and the concentration of emissions from each VOC species measured by EPA Method TO-15. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>
5.9.6	<p>1,2-(trans-) Dichloroethylene: Emissions Calculations: If required by the MPCA, the Permittee shall calculate and record emission rates of 1,2-(trans-) Dichloroethylene and of all the other chemicals analyzed by EPA Method TO-15, in pounds per day, using the following equation: $SVR = BTi \times Vrem$ Where: SVR = daily emissions of 1,2-(trans-) Dichloroethylene (or other chemicals analyzed by EPA Method TO-15), in pound/day; BTi = concentration of 1,2-(trans-) Dichloroethylene (or other chemicals analyzed by EPA Method TO-15) measured for the last required sample, in pounds/actual cubic foot; and Vrem = exhaust flow rate from the solvent vapor remediation stack, in standard cubic feet/day. As of permit issuance, the exhaust flow rate at the remediation stack is 695 standard cubic feet per minute (1,000,800 standard cubic feet per day). Other standard exhaust flow rates from the solvent vapor remediation stack allowed by this permit shall be based on MPCA-approved test results according to approved replicable methodology (ARM) requirements. Any subsequent standard exhaust flow rate from the solvent vapor remediation stack must be measured concurrently with the measurement of 1,2-(trans-) Dichloroethylene concentration. Records of the BTi value obtained for any given sample shall be made available as required by MPCA. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]</p>
5.9.7	<p>The Permittee shall operate and maintain the sub-slab depressurization and solvent vapor extraction system, and carbon canisters in COMG 9 in accordance with the Operation and Maintenance (O & M) Plan approved by the MPCA Remediation Division. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. The requirement to maintain TREA 50 and 51 terminates when the MPCA Remediation Division approves the removal of TREA 50 and TREA 51 in writing. [Minn. R. 7007.0800, subp. 14, Minn. Stat. 116.07, subd. 9(2)]</p>
5.9.8	<p>Carbon Canister Replacement: After 300 days of continuous service, or sooner if the manufacturer recommends replacement before 300 days of continuous service, the Permittee shall perform the following procedure:</p>

Requirement number	Requirement and citation
	1) Replace the lead carbon canister (first in-series) with a fresh carbon canister; 2) Move the lag carbon canister (second in-series) to the lead position; and 3) Install the new carbon canister as the lag carbon canister (second in-series). The Permittee shall keep records of the date of each canister change. The requirement for carbon canister replacement terminates when the MPCA Remediation Division approves the removal of TREA 50 and TREA 51 in writing. [Minn. R. 7007.0800, subp. 2(A), Minn. Stat. 116.07, subd. 9(2)]
5.9.9	Carbon Canister Removal. The Permittee is authorized to remove carbon canister control equipment (TREA 50 and TREA 51) upon written approval from the MPCA Remediation Division without obtaining a major permit amendment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2)]
5.9.10	Routine Inspections: The Permittee shall verify operation of the sub-slab vapor remediation system and visually inspect the condition of each carbon canister in COMG 9 with respect to alignment, saturation, and any other condition that may affect the filter's performance with the frequency required by MPCA Remediation Division. The Permittee shall maintain a daily written record of system and filter inspections. The requirement for routine inspections of carbon canisters terminates when the MPCA Remediation Division approves the removal of TREA 50 and TREA 51 in writing. [Minn. R. 7007.0800, subp. 2(A), Minn. Stat. 116.07, subd. 9(2)]
5.9.11	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the Solvent Vapor Extraction system and control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4-5, Minn. Stat. 116.07, subd. 9(2)]
5.9.12	Corrective Actions: If the sub-slab depressurization and solvent vapor extraction system, carbon canister or any of their components in COMG 9 are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the sub-slab depressurization and solvent vapor extraction system and carbon canisters. The Permittee shall keep a record of the type and date of any corrective action taken. The requirement for corrective actions on carbon canisters terminates when the MPCA Remediation Division approves the removal of TREA 50 and TREA 51 in writing. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5, Minn. Stat. 116.07, subd. 9(2)]
5.9.13	Protocol for Resetting the Standard Exhaust Flow Rate from the Solvent Vapor Remediation Stack: The Permittee may conduct performance testing to measure the standard exhaust flow rate and temperature from the solvent vapor remediation stack as allowed elsewhere in this permit. If the established standard exhaust flow rate from the solvent vapor remediation stack are to be reset, the reset shall be based on the standard exhaust flow rate from the solvent vapor remediation stack values recorded during the most recent MPCA-approved performance test where compliance with applicable emission limits was demonstrated. The established standard exhaust flow rate from the solvent vapor remediation stack shall be reset as follows: - if the highest standard exhaust flow rate recorded during the test are higher than the respective established standard exhaust flow rate, it shall be reset to the highest standard exhaust flow rate resulting from the test; or - if the highest standard exhaust flow rate recorded during the test are lower than the respective established emission factor, it shall be reset to the highest standard exhaust flow rate resulting from the test.

Requirement number	Requirement and citation
	The new standard exhaust flow rate shall be effective upon receipt of the Notice of Compliance letter that approves the test results and shall be incorporated into the permit when the permit is next amended. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.9.14	The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting Standard Exhaust Flow Rate allowed by this permit. [Minn. R. 7007.1500, subp. 1]
5.9.15	Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the Notice of Compliance letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
5.9.16	The Permittee shall operate EQUI 167 meeting the requirements of COMG 1. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
COMG 10	NOx: North Building Space Heating Capacity and Operation Limits
5.10.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.07966 pounds per hour 3-hour average. This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.10.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.07966 pounds per hour 3-hour average. This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.10.3	The Permittee shall limit emissions of Nitrogen Oxides \leq 1.0482 pounds per hour 3-hour average. This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.10.4	The Permittee shall limit emissions of Lead \leq 0.000005 pounds per hour 3-hour average. This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.10.5	The Permittee shall limit total maximum Heat Input \leq 10.69 million Btu per hour. This limit applies to the combined heat input of all the space heating units in COMG 10 located in the North Building (STRU 38). If the Permittee replaces any existing direct heating equipment, adds new direct heating equipment, or modifies the existing equipment, such equipment is subject to this permit limit as well as all of the requirements in COMG 10. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. The Permittee is not required to complete emissions calculations described in Minn. R. 7007.1200, subp. 2. A permit amendment will still be needed regardless of the emissions increase if the change will be subject to a new applicable requirement or requires revisions to the limits or monitoring and recordkeeping in this permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.10.6	The Permittee shall keep an inventory of combustion units operating in the North Building (STRU 38), including manufacturer, model number, maximum-rated heat input capacity, in million British Thermal Units per hour, and location of the combustion unit. These records shall be kept up-to-date and available for inspection. [Minn. R. 7007.0800, subp. 5]

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 59 of 672

Requirement number	Requirement and citation
5.10.7	The Permittee shall not operate the space heating equipment during the months of June, July and August. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.10.8	Daily Recordkeeping. On each day of operation, the Permittee shall record the space heaters operating in the North Building (STRU 38). [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
COMG 11	Nederman Filter and Smog Hog Control Equipment Train - Melt Pots
5.11.1	The Permittee shall operate and maintain in-series control equipment train such that it achieves an overall control efficiency for Particulate Matter ≥ 97.0 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.11.2	The Permittee shall operate and maintain in-series control equipment train such that it achieves an overall control efficiency for PM < 10 micron ≥ 97.0 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.11.3	The Permittee shall operate and maintain in-series control equipment train such that it achieves an overall control efficiency for PM < 2.5 micron ≥ 97.0 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.11.4	The Permittee shall operate and maintain in-series control equipment train such that it achieves an overall control efficiency for Lead ≥ 86.0 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.11.5	The Permittee shall vent emissions from EQUIs 101, 102, 103, 104, and 221 to an in-series control equipment train meeting the permit requirements under COMG 11. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.11.6	If the Permittee replaces any control equipment unit subject to the requirements in COMG 11, the replacement in-series control equipment train must meet or exceed the control efficiency requirements for COMG 11 as well as comply with all other requirements of COMG 11. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. If no amendment is needed for the replacement, the Permittee shall submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.11.7	The Permittee shall operate and maintain each control equipment train in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.11.8	Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of each control equipment train with respect to any other condition that may affect the control equipment train's performance. The Permittee shall maintain a daily written record of these inspections. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, sub. 4a(a)]
5.11.9	If the Permittee adds a new Nederman filter or replaces an existing Nederman filter subject to COMG 14 requirements, the new or replacement control must meet the Stage 1 filter and Stage 2 filter pressure drop defined by the manufacturer's specifications, unless a new range is set pursuant to

Requirement number	Requirement and citation
	Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.11.10	Pressure Drop: Daily Recordkeeping. If the Permittee replaces or adds a new Nederman filter subject to COMG 14 requirements, the Permittee shall record the time and date of each pressure drop reading and whether the recorded pressure drop was within the range specified by the manufacturer's specifications or the most recent MPCA-approved performance test. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.11.11	The Permittee shall document periods of non-operation of the control equipment train whenever the associated emission units are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.11.12	Daily Inspections: Once each operating day, the Permittee shall verify if the Nederman filter pressure drop reading is such that filter maintenance is required per the manufacturer's specifications or the most recent MPCA-approved performance test. If maintenance is required, the Permittee shall clean the unit per the manufacturer's specifications before the unit is placed in operation. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.11.13	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment train components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4 & 5]
5.11.14	Corrective Actions: If the control equipment train or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan. The Permittee shall keep a record of the type and date of any corrective action taken. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4 & 5]
5.11.15	Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) for each Smog Hog in COMG 11 at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of these verifications. [Minn. R. 7007.0800, subps. 4-5]
5.11.16	Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of each Smog Hog at all times. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7007.0800, subp. 4(C) and (D), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.11.16	Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer of the smog hogs, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4-5]
5.11.17	Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the Smog Hog On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the

Commented [A34]: There are two requirements numbered 5.11.16.

Requirement number	Requirement and citation
	necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]
5.11.18	Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the Smog Hog components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4-5]
5.11.19	Pre-Filter and Cell Maintenance for Smog Hogs: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher wastewater, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]
5.11.20	Corrective Actions for Smog Hogs: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range; or - the Smog Hog or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O&M Plan for the Smog Hog. The Permittee shall keep a record of the type and date of any corrective action taken for the Smog Hog. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4-5]
COMG 12	Nederman Filter and Smog Hog Control Equipment Train - Die Casting
5.12.1	The Permittee shall operate and maintain in-series control equipment train such that it achieves an overall control efficiency for Particulate Matter ≥ 86.6 percent control efficiency. [Minn. R. 7007.0800, subp. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.12.2	The Permittee shall operate and maintain in-series control equipment train such that it achieves an overall control efficiency for PM < 10 micron ≥ 86.6 percent control efficiency. [Minn. R. 7007.0800, subp. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.12.3	The Permittee shall operate and maintain in-series control equipment train such that it achieves an overall control efficiency for PM < 2.5 micron ≥ 86.6 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.12.4	The Permittee shall operate and maintain in-series control equipment train such that it achieves an overall control efficiency for Lead ≥ 86.0 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.12.5	The Permittee shall vent emissions from EQUIs 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 146, 147, 149, 150, 152, 153, 154, 155, 156, 157, and 158 to an in-series control equipment train meeting the permit requirements under COMG 12. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.12.6	If the Permittee replaces any control equipment unit subject to the requirements of COMG 12, the replacement in-series control equipment train must meet or exceed the control efficiency requirements for COMG 12 as well as comply with all other requirements of COMG 12. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable.

Requirement number	Requirement and citation
	If no amendment is needed for the replacement, the Permittee shall submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.12.7	If the Permittee adds a new Nederman filter or replaces an existing Nederman filter subject to COMG 12 requirements, the new or replacement control must meet the Stage 1 filter and Stage 2 filter pressure drop defined by the manufacturer's specifications, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.12.8	Pressure Drop: Daily Recordkeeping. If the Permittee replaces or adds a new Nederman filter subject to COMG 12 requirements, the Permittee shall record the time and date of each pressure drop reading and whether the recorded pressure drop was within the range specified by the manufacturer's specifications or the most recent MPCA-approved performance test. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.12.9	The Permittee shall document periods of non-operation of the control equipment train whenever the associated emission units are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.12.10	Daily Inspections: Once each operating day, the Permittee shall verify if the Nederman pressure drop reading is such that filter maintenance is required per the manufacturer's specifications or the most recent MPCA-approved performance test. If maintenance is required, the Permittee shall clean the unit per manufacturer's specifications before the unit is placed on operation. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.12.11	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the Nederman filter manufacturer's specifications, the Permittee shall inspect the control equipment train components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4 & 5]
5.12.12	The Permittee shall operate and maintain each control equipment train in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.12.13	Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of each control equipment train with respect to any other condition that may affect the control equipment train's performance. The Permittee shall maintain a daily written record of these inspections. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.12.14	Corrective Actions: If the control equipment train or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan. The Permittee shall keep a record of the type and date of any corrective action taken. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4 & 5]

Requirement number	Requirement and citation
5.12.15	Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) for each Smog Hog in COMG 12 at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of these verifications. [Minn. R. 7007.0800, subps. 4-5]
5.12.16	Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of each Smog Hog at all times. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7007.0800, subp. 4(C) and (D), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.12.17	Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer of the smog hogs, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4-5]
5.12.18	Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the Smog Hog On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]
5.12.19	Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the Smog Hog components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4-5]
5.12.20	Pre-Filter and Cell Maintenance for Smog Hogs: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher wastewater, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]
5.12.21	Corrective Actions for Smog Hogs: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range; or - the Smog Hog or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O&M Plan for the Smog Hog. The Permittee shall keep a record of the type and date of any corrective action taken for the Smog Hog. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subps. 4-5]
COMG 13	Direct Heating Equipment Rule Requirements
5.13.1	The Permittee shall limit Particulate Matter ≤ 0.30 grains per dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. This limit applies to each individual unit in COMG 13. [Minn. R. 7011.0610, subp. 1(A)(1)]
5.13.2	The Permittee shall limit Opacity ≤ 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. This limit applies to each individual unit in COMG 13. [Minn. R. 7011.0610, subp. 1(A)(2)]
5.13.3	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]

Requirement number	Requirement and citation
5.13.4	The Permittee shall keep records of fuel purchases showing fuel types for the purpose of reporting emissions to the annual emissions inventory. [Minn. R. 7007.0800, subp. 5, Minn. R. 7019.3000, subp. 1]
COMG 14	Nederman Filters - Spray Coaters
5.14.1	The Permittee shall operate and maintain each piece of control equipment in this group such that it achieves a control efficiency for Particulate Matter \geq 99.0 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.14.2	The Permittee shall operate and maintain each piece of control equipment in this group such that it achieves a control efficiency for PM < 10 micron \geq 99.0 percent control efficiency. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.14.3	The Permittee shall operate and maintain each piece of control equipment in this group such that it achieves a control efficiency for PM < 2.5 micron \geq 99.0 percent control efficiency. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.14.4	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in the Nederman filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.14.5	If the Permittee adds any new Nederman filters or replaces any existing Nederman filter subject to COMG 14 requirements, the new or replacement control must meet or exceed the control efficiency requirements of COMG 14 as well as comply with all other requirements of COMG 14. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. If no amendment is needed for the replacement, the Permittee shall submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.14.6	If the Permittee adds a new Nederman filter or replaces an existing Nederman filter subject to COMG 14 requirements, the new or replacement control must meet the Stage 1 filter and Stage 2 filter pressure drop defined by the manufacturer's specifications, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.14.7	Pressure Drop: Daily Recordkeeping. If the Permittee replaces or adds a new Nederman filter subject to COMG 14 requirements, the Permittee shall record the time and date of each pressure drop reading and whether the recorded pressure drop was within the range specified by the manufacturer's specifications or the most recent MPCA-approved performance test. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.14.8	The Permittee shall document periods of non-operation of the control equipment whenever the associated emission units are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-

Commented [A35]: Replace "Nederman filter" with "HEPA filter". WG can use any HEPA filter that fits to replace the Nederman-brand filters in the devices. This comment applies everywhere else in the permit where the phrase "Nederman filter" is found: replace with "HEPA filter". Similarly, if it becomes necessary to replace a Nederman device, Water Gremlin needs the flexibility to use any oil/mist separator device of equivalent capture and control.

Requirement number	Requirement and citation
	7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.14.9	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications or the most recent MPCA-approved performance test. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.14.10	Daily Inspections: Once each operating day, the Permittee shall visually inspect each Nederman filter with respect to any other condition that may affect the Nederman filter's performance. The Permittee shall maintain a daily written record of these inspections. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.14.11	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the Nederman filter manufacturer's specifications, the Permittee shall inspect the control equipment train components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.14.12	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
COMG 15	NOx: South Building Space Heating Capacity and Operation Limits
5.15.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.0171 pounds per hour 3-hour average. This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.15.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.0171 pounds per hour 3-hour average. This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.15.3	The Permittee shall limit emissions of Nitrogen Oxides \leq 0.2248 pounds per hour 3-hour average. This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.15.4	The Permittee shall limit emissions of Lead \leq 0.000001 pounds per hour 3-hour average. This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.15.5	The Permittee shall limit total maximum Heat Input \leq 2.29 million Btu per hour. This limit applies to the combined heat input of all space heating units in COMG 15 located in the South Building (STRU 42). If the Permittee replaces any existing direct heating equipment, adds new direct heating equipment, or modifies the existing equipment, such equipment is subject to this permit limit as well as all the requirements in COMG 15. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. The Permittee is not required to complete emissions calculations described in Minn. R. 7007.1200, subp. 2. A permit amendment will still be needed regardless of the emissions increase if the change will be subject to a new applicable

Requirement number	Requirement and citation
	requirement or requires revisions to the limits or monitoring and recordkeeping in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.15.6	<p>The Permittee shall keep an inventory of combustion units in the South Building (STRU 42), including manufacturer, model number, maximum-rated heat input capacity, in million British Thermal Units per hour, and location of the combustion unit. The Permittee shall update the list to include any replaced, modified, or new equipment prior to making the change. The list shall correlate the units to the Subject Item numbers used in this permit and shall include the data on GI-04, GI-05B, GI-05C, and GI-05F. The date of construction shall be the date the change was made for replaced, modified, or new equipment.</p> <p>The list shall correlate the units to the Subject Item numbers used in this permit and shall include the data on GI-04, GI-05B, GI-05C, and GI-05F. The date of construction shall be the date the change was made for replaced, modified, or new equipment. [Minn. R. 7007.0800, subp. 2(A)]</p>
5.15.7	The Permittee shall not operate the space heating equipment during the months of June, July and August. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.15.8	Daily Recordkeeping. On each day of operation, the Permittee shall record the space heaters operating in the South Building (STRU 42). [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
COMG 16	Die Casting Annual Throughput and Lead Emission Limits
5.16.1	Process Throughput Limit for the First 365 Days Beginning on Permit Issuance Date. The Permittee shall limit Process Throughput $\leq 39,355.50$ tons per year 365-day sum to be calculated each operating day for the previous operating day since the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. Stat. 116.07, subd. 4a(a)]
5.16.2	Process Throughput Limit Effective on the 366 th Day Following Permit Issuance and Thereafter. The Permittee shall limit Process Throughput $\leq 39,355.50$ tons per year 365-day rolling sum to be calculated each operating day for the previous 365-day period as described later in this permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. Stat. 116.07, subd. 4a(a)]
5.16.3	Emission Limit for the First 365 Days Beginning on Permit Issuance Date. The Permittee shall limit captured and controlled emissions of Lead ≤ 48.21 pounds per year 365-day sum to be calculated each operating day for the previous operating days since the date of permit issuance as described later in this permit. This limit applies to captured and controlled lead emissions from all EQUIs in COMG 16. The captured and controlled emissions from each EQUI in COMG 16 are the stack lead emissions calculated at each corresponding EQUI stack by using the calculation method described in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. Stat. 116.07, subd. 4a(a)]
5.16.4	Emission Limit Effective on the 366 th Day Following Permit Issuance and Thereafter. The Permittee shall limit captured and controlled emissions of Lead ≤ 48.21 pounds per year 365-day rolling sum to be calculated each operating day for the previous 365-day period as described later in this permit. This limit applies to captured and controlled lead emissions from all EQUIs in COMG 16. The captured and controlled emissions from each EQUI in COMG 16 are the stack lead emissions calculated at each corresponding EQUI stack by using the calculation method described in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. Stat. 116.07, subd. 4a(a)]
5.16.5	Emission Limit for the First 365 Days Beginning on Permit Issuance Date. The Permittee shall limit uncaptured emissions of Lead ≤ 8.46 pounds per year 365-day sum to be calculated each operating day for the previous operating days since the date of permit issuance as described later in this permit. This limit applies to uncaptured lead emissions from all EQUIs in COMG 16. The uncaptured and controlled emissions from each EQUI in COMG 16 are the stack lead emissions calculated at each

Requirement number	Requirement and citation
	corresponding EQUI stack by using the calculation method described in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. Stat. 116.07, subd. 4a(a)]
5.16.6	Emission Limit on the 366 th Day Following Permit Issuance and Thereafter. The Permittee shall limit uncaptured emissions of Lead <= 8.46 pounds per year 365-day rolling sum to be calculated each operating day for the previous 365-day period as described later in this permit. This limit applies to uncaptured lead emissions from all EQUIs in COMG 16. The uncaptured and controlled emissions from each EQUI in COMG 16 are the stack lead emissions calculated at each corresponding EQUI stack by using the calculation method described in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. Stat. 116.07, subd. 4a(a)]
5.16.7	<p>Process Throughput: Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day:</p> <ol style="list-style-type: none"> 1) For the first 365 days beginning on permit issuance date, the total weight of each lead-containing material processed by each EQUI in COMG 16, in tons per year, for the previous operating days since permit issuance. This shall be based on written usage logs; 2) For the first 365 days beginning on permit issuance date, the total weight of all lead-containing material processed by each EQUI in COMG 16, in tons per year, for the previous operating days since the date of permit issuance. This shall be based on written usage logs; 3) For the first 365 days beginning on permit issuance date, the cumulative sum process throughput of lead-containing material from all EQUIs in COMG 16, in tons per year, accumulated from the previous operating days since the date of permit issuance; 4) On the 366th day following permit issuance and daily thereafter, the total weight of each lead-containing material processed by each EQUIs in COMG 16, in tons per year, for the previous 365 days. This shall be based on written usage logs; 5) On the 366th day following permit issuance and daily thereafter, the total weight of all lead-containing material processed by each EQUIs in COMG 16, in tons per year, for the previous 365 days. This shall be based on written usage logs; and 6) On the 366th day following permit issuance and daily thereafter, the 365-day rolling sum of all lead-containing material processed from all EQUIs in COMG 16, in tons per year, for the previous 365-day period by calculating the total process throughput for the previous 365 days. [Minn. R. 7007.0800, subps. 2(A) & 2(B) Minn. Stat. 116.07, subd. 4a(a)]
5.16.8	<p>Lead: Captured and Controlled Emissions: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit:</p> <ol style="list-style-type: none"> 1) Total captured and controlled lead emissions from all EQUIs in COMG 16 for the previous operating day, in pounds. The captured and controlled emissions for each EQUI in COMG 16 must be calculated using formulas specified in this permit; 2) For the first 365 days beginning on permit issuance date, the cumulative sum annual captured and controlled lead emissions from all EQUIs in COMG 16, in pounds per year, for the previous operating days since the date of permit issuance. The captured and controlled lead emissions released through each STRU to which each EQUI in COMG 16 vents are calculated using formulas specified in this permit; and 3) On the 366th day following permit issuance and daily thereafter, the 365-day rolling sum annual captured and controlled lead emissions from each EQUI in COMG 16, in pounds per year, for the previous 365-day period. The captured and controlled emissions released through each STRU to which each EQUI in COMG 16 vents are calculated using formulas specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.16.9	<p>Lead: Uncaptured Emissions: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit:</p> <ol style="list-style-type: none"> 1) Total uncaptured lead emissions from all EQUIs in COMG 16 for the previous operating day, in pounds. The uncontrolled emissions for each EQUI in COMG 16 must be calculated using formulas

Commented [A36]: Replace "each" with "all".

Commented [A37]: This may need to be changed to "all" – Water Gremlin understands these requirements as documenting the lead throughput of each DC for subpart 1, the total lead throughput of the DCs for subpart 2, and the cumulative sum of the total lead throughput of the DCs as a collective group for subpart 3.

Commented [A38]: Strike the word "each" in 5.16.7 subpart 4 or replace with "all". WG will track the total weight of lead-containing material processed by each EQUI in COMG 16.

Commented [A39]: Delete subpart 5 of 5.16.7. This is redundant to subpart 4. For emission calculations and modeling purposes, all lead-containing material was assumed to 100% lead.

Requirement number	Requirement and citation
	specified in this permit; 2) For the first 365 days beginning on permit issuance date, the cumulative sum annual uncaptured lead emissions from all EQUIS in COMG 16, in pounds per year, for the previous operating days since the date of permit issuance. The uncaptured lead emissions released through each STRU to which each EQUI in COMG 16 vents are calculated using formulas specified in this permit; and 3) On the 366 th day after permit issuance and daily thereafter, the 365-day rolling sum uncaptured lead emissions from all EQUIS in COMG 16, in pounds per year, for the previous 365-day period. The uncaptured lead emissions released through each STRU to which each EQUI in COMG 16 vents are calculated using formulas specified in this permit. [Minn. R. 7007.0800, subs. 2(A) & 2(B), Minn. Stat. 116.07, subd. 4a(a)]
5.16.10	Captured and Controlled Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum annual captured and controlled lead emissions for the first 365 days after permit issuance from COMG 16 using the following equations: $COMG16CS = STRU15L365CS + STRU16L365CS + STRU17L365CS + STRU74L365CS + STRU20L365CS + STRU75L365CS + STRU23L365CS + STRU24L365CS + STRU25L365CS + STRU26L365CS + STRU30L365CS + STRU31L365CS + STRU32L365CS + STRU33L365CS + STRU34L365CS$ where: COMG16CS = annual cumulative sum captured and controlled lead emissions emitted from all EQUIS in COMG 16 for the first 365 days beginning on permit issuance date, in pounds/year; and STRU#L365CS = annual cumulative sum captured and controlled lead emissions emitted through the STRU to which each EQUI in COMG 16 vents for the first 365 days beginning on permit issuance date, in pounds/year. [Minn. R. 7007.0800, subs. 4-5]
5.16.	Captured and Controlled Lead: Daily Calculations on the 366 th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from COMG 16 using the following equations: $COMG16CL = STRU15L365RS + STRU16L365RS + STRU17L365RS + STRU74L365RS + STRU20L365RS + STRU75L365RS + STRU23L365RS + STRU24L365RS + STRU25L365RS + STRU26L365RS + STRU30L365RS + STRU31L365RS + STRU32L365RS + STRU33L365RS + STRU34L365RS$ where: COMG16CL = 365-day rolling sum captured and controlled lead emissions emitted from all EQUIS in COMG 16 for the previous 365-day period, in pounds/year; and STRU#L365RS = 365-day rolling sum captured and controlled lead emissions emitted through the STRU to which each EQUI in COMG 16 vents for the previous 365-day period, in pounds/year. [Minn. R. 7007.0800, subs. 4-5]
5.16.12	Uncaptured Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum annual uncaptured lead emissions for the first 365 days beginning on permit issuance date from COMG 16 using the following equations: $COMG16UCS = STRU43L365CS + STRU44L365CS + STRU45L365CS + STRU46L365CS + STRU47L365CS + STRU48L365CS + STRU49L365CS + STRU50L365CS + STRU51L365CS + STRU52L365CS + STRU53L365CS + STRU56L365CS$ where:

Requirement number	Requirement and citation
	<p>COMG16UCS = annual cumulative sum uncaptured lead emissions emitted from all EQUIs in COMG 16 for the first 365 days beginning on permit issuance date, in pounds/year; and STRU#L365CS = annual cumulative sum uncaptured lead emissions emitted through the STRU to which each EQUI in COMG 16 vents for the first 365 days beginning on permit issuance date, in pounds/year. [Minn. R. 7007.0800, subps. 4-5]</p>
5.16.13	<p>Uncaptured Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual uncaptured lead emissions from COMG 16 using the following equations: COMG16UL = STRU43L365RS + STRU44L365RS + STRU45L365RS + STRU46L365RS + STRU47L365RS + STRU48L365RS + STRU49L365RS + STRU50L365RS + STRU51L365RS + STRU52L365RS + STRU53L365RS + STRU56L365RS</p> <p>where:</p> <p>COMG16UL = 365-day rolling sum uncaptured lead emissions emitted from all EQUIs in COMG 16 for the previous 365-day period, in pounds/year; and STRU#L365RS = 365-day rolling sum uncaptured lead emissions emitted through the STRU to which each EQUI in COMG 16 vents for the previous 365-day period, in pounds/year. [Minn. R. 7007.0800, subps. 4-5]</p>
EQUI 82	Battery Terminal Post Coater 6
5.17.1	<p>At the time of permit issuance, EQUI 82 is a UV spray coater as described in Appendix B of this permit and shall comply with the requirements under COMG 1 and COMG 5. EQUI 82 shall comply with the requirements under COMG 2 except for the condition to operate with control equipment meeting the requirements in COMG 14. EQUI 82 may be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subp. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
EQUI 84	Battery Terminal Post Coater 9
5.18.1	<p>At the time of permit issuance, EQUI 84 is a UV spray coater as described in Appendix B of this permit and shall comply with the requirements under COMG 1, COMG 2, and COMG 5. EQUI 84 may be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]</p>
5.18.2	<p>The Permittee shall vent emissions from EQUI 84 to control equipment meeting the requirements of TREA 55 whenever EQUI 84 operates. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
EQUI 85	Battery Terminal Post Coater 10
5.19.1	<p>At the time of permit issuance, EQUI 85 is a water-based drip coater as described in Appendix B of this permit and it exhausts emissions through STRU 73. EQUI 85 shall comply with the requirements under COMG 1 and COMG 5. Compliance with COMG 5 is required for as long as EQUI 85 exhausts emissions through STRU 73. EQUI 85 may only be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
EQUI 87	Battery Terminal Post Coater 12

Requirement number	Requirement and citation
5.20.1	At the time of permit issuance, EQUI 87 is a VOC dip coater as described in Appendix B of this permit and shall comply with the requirements under COMG 1 and COMG 5. EQUI 87 may only be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
EQUI 88	Battery Terminal Post Coater 15
5.21.1	At the time of permit issuance, EQUI 88 is a VOC or water-based drip/spray coater as described in Appendix B of this permit and shall comply with requirements under COMG 1, COMG 4 when operating with VOC coatings. EQUI 88 shall comply with requirements under COMG 1, COMG 5, and COMG 8 when operating with water-based coating. EQUI 88 may only be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.21.2	The Permittee shall vent emissions from EQUI 88 to control equipment meeting the requirements of TREA 56 whenever EQUI 88 operates. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
EQUI 89	Battery Terminal Post Coater 17
5.22.1	At the time of permit issuance, EQUI 89 is a water-based dip coater as described in Appendix B of this permit and it exhausts emissions through STRU 73. EQUI 89 shall comply with requirements under COMG 1 and COMG 5. Compliance with COMG 5 is required for as long as EQUI 89 exhausts emissions through STRU 73. EQUI 89 may only be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
EQUI 92	Battery Terminal Post Coater 20
5.23.1	At the time of permit issuance, EQUI 92 is a water-based dip coater as described in Appendix B of this permit and it exhausts emissions through STRU 73. EQUI 92 shall comply with requirements under COMG 1 and COMG 5. Compliance with COMG 5 is required for as long as EQUI 92 exhausts emissions through STRU 73. EQUI 92 may only be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000]
EQUI 93	Battery Terminal Post Coater 21
5.24.1	At the time of permit issuance, EQUI 93 is a VOC or water-based dip coater as described in Appendix B of this permit and shall comply with requirements under COMG 1 and COMG 5. EQUI 93 may only be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
EQUI 94	Battery Terminal Post Coater 22
5.25.1	At the time of permit issuance, EQUI 94 is a VOC or water-based drip coater as described in Appendix B of this permit and shall comply with requirements under COMG 1 and COMG 5. EQUI 94 may only be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
EQUI 95	Battery Terminal Post Coater 23

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 71 of 672

Requirement number	Requirement and citation
5.26.1	At the time of permit issuance, EQUI 95 is a VOC or water-based spray coater as described in Appendix B of this permit. EQUI 95 shall comply with requirements under COMG 1, COMG 4 and COMG 5 when operating with VOC coating. EQUI 95 shall comply with requirements under COMG 1, COMG 5, and COMG 8 when operating with water-based coating. EQUI 95 may only be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.26.2	The Permittee shall vent emissions from EQUI 95 to control equipment meeting the requirements of TREA 57 whenever EQUI 95 operates. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
EQUI 97	Battery Terminal Post Coater 25
5.27.1	At the time of permit issuance, EQUI 97 is a water-based dip coater as described in Appendix B of this permit and it exhausts emissions through STRU 73. EQUI 97 shall comply with requirements under COMG 1 and COMG 5. Compliance with COMG 5 is required for as long as EQUI 97 exhausts emissions through STRU 73. EQUI 97 may only be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
EQUI 98	Battery Terminal Post Coater 26
5.28.1	At the time of permit issuance, EQUI 98 is a VOC or water-based drip coater as described in Appendix B of this permit and shall comply with requirements under COMG 1 and COMG 5. EQUI 98 may only be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
EQUI 99	Battery Terminal Post Coater 27
5.29.1	At the time of permit issuance, EQUI 99 is a VOC or water-based dip coater as described in Appendix B of this permit and shall comply with requirements under COMG 1 and COMG 5. EQUI 99 may only be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
EQUI 100	Battery Terminal Post Coater 28
5.30.1	At the time of permit issuance, EQUI 100 is a VOC or water-based drip coater as described in Appendix B of this permit and shall comply with requirements under COMG 1 and COMG 5. EQUI 100 may only be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
EQUI 101	CF Scrap Re-Melt Pot
5.31.1	The Permittee must limit Process Throughput <= 2180.0 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.31.2	Process Throughput: Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain a record of the total weight of each lead-containing material processed by EQUI 101. This shall be based on written usage logs. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R.

Requirement number	Requirement and citation
	7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.31.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 101 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.31.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 101 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.31.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equation: $\text{EQUI101PM10} = [A \times B \times (1 - \text{CE1})] / 24$ Where: EQUI101PM10 = daily average PM10 emissions from EQUI 101, in pounds/hour; A = total weight of lead-containing material processed by EQUI 101 for the previous operating day, in pounds/day; and B = uncontrolled PM10 emission factor for EQUI 101 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 11, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.31.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equation: $\text{EQUI101PM2.5} = [A \times C \times (1 - \text{CE2})] / 24$ Where: EQUI101PM2.5 = daily average PM2.5 emissions from EQUI 101, in pounds/hour; A = total weight of lead-containing material processed by EQUI 101 for the previous operating day, in pounds/day; and C = uncontrolled PM2.5 emission factor for EQUI 101 listed in Appendix D, as a fraction; and CE2 = minimum overall PM2.5 control efficiency required by COMG 11, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.31.7	Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equation: $\text{EQUI101L} = D \times E \times (1 - \text{CE3})$ Where: EQUI101L = total lead emissions from EQUI 101, in pounds/day; D = total weight of lead-containing material processed by EQUI 101 for the previous operating day, in pounds/day; and E = uncontrolled lead emission factor for EQUI 101 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE3 = minimum overall lead control efficiency required by COMG 11, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.31.8	The Permittee shall vent melt emissions from EQUI 101 to control equipment meeting the requirements of TREA 1 and TREA 60 operated in-series, and COMG 11 whenever EQUI 101 operates. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.31.9	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
5.31.10	The Permittee shall vent melt emissions from EQUI 101 to a stack/vent meeting the requirements of STRU 1 whenever EQUI 101 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.31.11	The Permittee shall vent combustion emissions from EQUI 101 to a stack/vent meeting the requirements of STRU 68 whenever EQUI 101 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.31.12	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.31.13	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.31.14	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
5.31.15	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and</p>

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 74 of 672

Requirement number	Requirement and citation
	shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.31.16	PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.31.17	PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
5.31.18	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.31.19	Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.31.20	Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
EQUI 102	Small Re-Melt Pot
5.32.1	The Permittee must limit Process Throughput <= 1000.0 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.32.2	Process Throughput: Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain a record of the total weight of each lead-containing material processed by EQUI 102. This shall be based on written usage logs. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.32.3	<p>Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following:</p> <ol style="list-style-type: none"> 1) The total weight of each lead-containing material processed by EQUI 102 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and

Requirement number	Requirement and citation
	3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.32.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 102 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.32.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equation: $\text{EQUI102PM10} = [A \times B \times (1 - \text{CE1})] / 24$ Where: EQUI102PM10 = daily average PM10 emissions from EQUI 102, in pounds/hour; A = total weight of lead-containing material processed by EQUI 102 for the previous operating day, in pounds/day; and B = uncontrolled PM10 emission factor for EQUI 102 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 11, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.32.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equation: $\text{EQUI102PM2.5} = [A \times C \times (1 - \text{CE2})] / 24$ Where: EQUI102PM2.5 = daily average PM2.5 emissions from EQUI 102, in pounds/hour; A = total weight of lead-containing material processed by EQUI 102 for the previous operating day, in pounds/day; and C = uncontrolled PM2.5 emission factor for EQUI 102 listed in Appendix D, as a fraction; and CE2 = minimum overall PM2.5 control efficiency required by COMG 11, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.32.7	Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equation: $\text{EQUI102L} = D \times E \times (1 - \text{CE3})$ Where: EQUI102L = total lead emissions from EQUI 102, in pounds/day; D = total weight of lead-containing material processed by EQUI 102 for the previous operating day, in pounds/day; E = uncontrolled lead emission factor for EQUI 102 listed in Appendix D, as a fraction; and CE3 = minimum overall lead control efficiency required by COMG 11, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.32.8	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
5.32.9	The Permittee shall vent melt emissions from EQUI 102 to control equipment meeting the requirements of TREA 1 and TREA 60 operated in-series, and COMG 11 whenever EQUI 102 operates. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.32.10	The Permittee shall vent melt emissions from EQUI 102 to a stack/vent meeting the requirements of STRU 1 whenever EQUI 102 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.32.11	The Permittee shall vent combustion emissions from EQUI 102 to a stack/vent meeting the requirements of STRU 68 whenever EQUI 102 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.32.12	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.32.13	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.32.14	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
5.32.15	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.32.16	PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.32.17	PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the

Requirement number	Requirement and citation
	new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
5.32.18	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.32.19	Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.32.20	Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
5.32.21	The Permittee shall not operate EQUI 102 and EQUI 103 simultaneously. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 103	Doe Run Melt Pot
5.33.1	The Permittee must limit Process Throughput <= 240.0 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.33.2	Process Throughput: Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain a record of the total weight of each lead-containing material processed by EQUI 103. This shall be based on written usage logs. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.33.3	<p>Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following:</p> <ol style="list-style-type: none"> 1) The total weight of each lead-containing material processed by EQUI 103 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.33.4	<p>Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following:</p> <ol style="list-style-type: none"> 1) The total weight of each lead-containing material processed by EQUI 103 in the previous operating day using the daily usage records; and

Requirement number	Requirement and citation
	2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.33.5	<p>PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equation: $\text{EQUI103PM10} = [A \times B \times (1 - \text{CE1})] / 24$</p> <p>Where:</p> <p>EQUI103PM10 = daily average PM10 emissions from EQUI 103, in pounds/hour; A = total weight of lead-containing material processed by EQUI 103 for the previous operating day, in pounds/day; and B = uncontrolled PM10 emission factor for EQUI 103 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 11, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.33.6	<p>PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equation: $\text{EQUI103PM2.5} = [A \times C \times (1 - \text{CE2})] / 24$</p> <p>Where:</p> <p>EQUI103PM2.5 = daily average PM2.5 emissions from EQUI 103, in pounds/hour; A = total weight of lead-containing material processed by EQUI 103 for the previous operating day, in pounds/day; and C = uncontrolled PM2.5 emission factor for EQUI 103 listed in Appendix D, as a fraction; and CE2 = minimum overall PM2.5 control efficiency required by COMG 11, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.33.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equation: $\text{EQUI103L} = D \times E \times (1 - \text{CE3})$</p> <p>Where:</p> <p>EQUI103L = total lead emissions from EQUI 103, in pounds/day; D = total weight of lead-containing material processed by EQUI 103 for the previous operating day, in pounds/day; and E = uncontrolled lead emission factor for EQUI 103 listed in Appendix D, as a fraction; and CE3 = minimum overall lead control efficiency required by COMG 11, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.33.8	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
5.33.9	The Permittee shall vent melt emissions from EQUI 103 to control equipment meeting the requirements of TREA 1 and TREA 60 operated in-series, and COMG 11 whenever EQUI 103 operates. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.33.10	The Permittee shall vent melt emissions from EQUI 103 to a stack/vent meeting the requirements of STRU 1 whenever EQUI 103 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.33.11	The Permittee shall vent combustion emissions from EQUI 103 to a stack/vent meeting the requirements of STRU 69 whenever EQUI 103 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]

Requirement number	Requirement and citation
5.33.12	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.33.13	<p>PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.33.14	<p>PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.33.15	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.33.16	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.33.17	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.33.18	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee</p>

Requirement number	Requirement and citation
	EQUI104PM10 = daily average PM10 emissions from EQUI 104, in pounds/hour; A = total weight of lead-containing material processed by EQUI 104 for the previous operating day, in pounds/day; and B = uncontrolled PM10 emission factor for EQUI 104 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 11, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.34.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equation: $\text{EQUI104PM2.5} = [A \times C \times (1 - \text{CE2})] / 24$ Where: EQUI104PM2.5 = daily average PM2.5 emissions from EQUI 104, in pounds/hour; A = total weight of lead-containing material processed by EQUI 104 for the previous operating day, in pounds/day; and C = uncontrolled PM2.5 emission factor for EQUI 104 listed in Appendix D, as a fraction; and CE2 = minimum overall PM2.5 control efficiency required by COMG 11, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.34.7	Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equation: $\text{EQUI104L} = D \times E \times (1 - \text{CE3})$ Where: EQUI104L = total lead emissions from EQUI 104, in pounds/day; D = total weight of lead-containing material processed by EQUI 104 for the previous operating day, in pounds/day; and E = uncontrolled lead emission factor for EQUI 104 listed in Appendix D, as a fraction; and CE3 = minimum overall lead control efficiency required by COMG 11, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.34.8	Fuel type: Natural gas only, by design. [Minn. R. 7005.0100, subp. 35a]
5.34.9	The Permittee shall vent melt emissions from EQUI 104 to control equipment meeting the requirements of TREA 1 and TREA 60 operated in-series, and COMG 11 whenever EQUI 104 operates. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.34.10	The Permittee shall vent melt emissions from EQUI 104 to a stack/vent meeting the requirements of STRU 1 whenever EQUI 104 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.34.11	The Permittee shall vent combustion emissions from EQUI 104 to a stack/vent meeting the requirements of STRU 68 whenever EQUI 104 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.34.12	PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1. The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-

Requirement number	Requirement and citation
	<p>approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.34.13	<p>PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.34.14	<p>PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.34.15	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.34.16	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.34.17	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.34.18	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and</p>

Requirement number	Requirement and citation
	shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.34.19	Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.34.20	Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
EQUI 113	Tool room 1 Abrasive Blasting
5.35.1	The Permittee is prohibited from increasing emissions of pollutants from EQUI 113 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. The Permittee shall vent emissions from EQUI 113 control equipment meeting the permit requirements of TREA 52. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.35.2	The Permittee shall vent emissions from EQUI 113 to a stack/vent meeting the requirements of STRU 57 whenever EQUI 113 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 114	Tool room 2 Abrasive Blasting
5.36.1	The Permittee is prohibited from increasing emissions of pollutants from EQUI 114 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. The Permittee shall vent emissions from EQUI 114 control equipment meeting the permit requirements of TREA 53. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.36.2	The Permittee shall vent emissions from EQUI 114 to a stack/vent meeting the requirements of STRU 57 whenever EQUI 114 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 115	DC Abrasive Blasting
5.37.1	The Permittee is prohibited from increasing emissions of pollutants from EQUI 115 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. The Permittee shall vent emissions from EQUI 115 control equipment meeting the permit requirements of TREA 54. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.37.2	The Permittee shall vent emissions from EQUI 115 to a stack/vent meeting the requirements of STRUs 43 and 50 whenever EQUI 115 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 116	Battery Terminal Post Coater 30
5.38.1	The Permittee shall vent emissions from EQUI 116 to a stack/vent meeting the requirements of STRU 50 whenever EQUI 116 operates. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.38.2	At the time of permit issuance, EQUI 116 is a water-based dip coater as described in Appendix B of this permit and shall comply with requirements under COMG 1. EQUI 116 may only be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]

Requirement number	Requirement and citation
5.38.3	The Permittee shall apply water-based coating from EQUI 116 using dip or drip application methods only unless it is modified as authorized elsewhere in this permit. Spray application of coating while venting emissions to STRU 50 is prohibited. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 117	South Building R&D Coater
5.39.1	The Permittee shall vent emissions from EQUI 117 to a stack/vent meeting the requirements of STRU 35 whenever EQUI 117 operates. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.39.2	At the time of permit issuance, EQUI 117 is a UV spray coater as described in Appendix B of this permit and shall comply with requirements under COMG 1. EQUI 117 may only be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.39.3	The Permittee is prohibited from using any coating that contains any hazardous air pollutant (HAP), including the target HAPs as defined under 40 CFR Section 63.11180. [Minn. R. 7007.0800, subps. 2(A)]
5.39.4	Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain a record of the total quantity of each coating and other solids-containing material, including the solids content of each coating (as a mass fraction), used by EQUI 117 and the time of the day when EQUI 117 was in operation. This shall be based on written usage logs. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.39.5	<p>Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate, record, and maintain a record of the following for the previous operating day using the daily usage records:</p> <ol style="list-style-type: none"> 1) Total weight of UV coating used by EQUI 117, in pounds/day; 2) Daily hourly UV coating used by EQUI 117 in pound/hour, which is equal to the pounds per day of UV coating used divided by 18 hours of allowable daily operation; and 3) Daily average hourly emissions of PM10 and PM2.5 from EQUI 117 as determined elsewhere in this permit, in pounds/hour. <p>This record shall also include solids contents of each material as determined by the Material Content requirement of this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.39.6	<p>PM < 10 micron: The Permittee shall calculate PM10 emissions from EQUI 117 using the following equations: $EQUI117PM10 = (F/18) \times G$</p> <p>where:</p> <p>EQUI117PM10 = daily average PM10 emissions from EQUI 117, in pounds/hour; F = total weight of coating used in EQUI 117 based on daily usage logs, in pounds/day; and G = uncontrolled PM10 emission factor, in pounds PM10 per pound of coating, listed in Appendix B, as a fraction. Other uncontrolled emission factors allowed by this permit shall be based on the most recent MPCA-approved stack test results performed according to approved replicable methodology (ARM) requirements. [Minn. R. 7007.0800, subps. 4-5, Minn. R. 7009.0020-7009.0090]</p>

Commented [A40]: Insert "average".

Requirement number	Requirement and citation
5.39.7	<p>PM < 2.5 micron: PM < 2.5 micron: Daily Calculations. The Permittee shall calculate PM2.5 emissions from EQUI 117 using the following equations: $\text{EQUI117PM2.5} = (F/18) \times H$</p> <p>where:</p> <p>EQUI117PM2.5 = daily average PM2.5 emissions from EQUI 117, in pounds/hour; F = total weight of coating used in EQUI 117 based on daily usage logs, in pounds/day; and H = uncontrolled PM2.5 emission factor, in pounds PM2.5 per pound of coating, listed in Appendix B, as a fraction. Other uncontrolled emission factors allowed by this permit shall be based on the most recent MPCA-approved stack test results performed according to approved replicable methodology (ARM) requirements. [Minn. R. 7007.0800, subps. 4-5, Minn. R. 7009.0020-7009.0090]</p>
5.39.8	<p>Maximum Contents of Materials and Process Rate: The Permittee assumed certain worst-case contents of materials and process rates when determining the short-term potential to emit of EQUI 117. These assumptions are listed in Appendix B of this permit. Increasing the process rate or changing to a material that has a higher content of any of the given pollutants, or an addition of a pollutant not listed in Appendix B, is considered a change in method of operation that must be evaluated under Minn. R. 7007.1200, subp. 3 to determine if a permit amendment or notification is required under Minn. R. 7007.1150. [Minn. R. 7005.0100, subps. 35a]</p>
5.39.9	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.39.10	<p>PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.39.11	<p>PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.39.12	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate</p>

Requirement number	Requirement and citation
	in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test. The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.39.13	PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.39.14	PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
5.39.15	The Permittee must limit the daily operation of EQUI 117 to the period between 5 am and 11 pm. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 120	Emergency Generator Engine
5.40.1	The Permittee shall vent emissions from EQUI 120 to a stack/vent meeting the requirements of STRU 4 whenever EQUI 120 operates. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.40.2	The Permittee must limit emissions of NMHC+NOx <= 4.7 grams per kilowatt-hour. [40 CFR 60.4202(a)(2), 40 CFR 60.4205(b), 40 CFR 63.6590(c), Minn. R. 7011.2305]
5.40.3	The Permittee must limit emissions of Particulate Matter <= 0.40 grams per kilowatt-hour. [40 CFR 60.4202(a)(2), 40 CFR 60.4205(b), 40 CFR 63.6590(c), Minn. R. 7011.2305]
5.40.4	The Permittee must limit emissions of Carbon Monoxide <= 5.0 grams per kilowatt-hour. [40 CFR 60.4202(a)(2), 40 CFR 60.4205(b), Minn. R. 7011.2305]
5.40.5	The Permittee must limit emissions of Opacity <= 20 percent opacity during the acceleration mode. [40 CFR 60.4202(a)(2), 40 CFR 60.4205(b), 40 CFR 63.6590(c), Minn. R. 7011.2305]
5.40.6	The Permittee must limit emissions of Opacity <= 15 percent opacity during the lugging mode. [40 CFR 60.4202(a)(2), 40 CFR 60.4205(b), 40 CFR 63.6590(c), Minn. R. 7011.2305]
5.40.7	The Permittee must limit emissions of Opacity <= 50 percent opacity during the peaks in either the acceleration or lugging modes. [40 CFR 60.4202(a)(2), 40 CFR 60.4205(b), 40 CFR 63.6590(c), Minn. R. 7011.2305]
5.40.8	The Permittee must limit Sulfur Content of Fuel <= 15.0 parts per million and either a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume, as required by 40 CFR Section 80.510(b). [40 CFR 60.4207(b), 40 CFR 63.6590(c), Minn. R. 7011.2305]
5.40.9	Sulfur Dioxide <= 0.0015 pounds per million Btu heat input. The potential to emit from the unit is 0.00044 lb/MMBtu due to equipment design and allowable fuels. [Minn. R. 7011.2300, subp. 2(B)]
5.40.10	Opacity <= 20 percent opacity once operating temperatures have been attained. [Minn. R. 7011.2300, subp. 1]
5.40.11	The Permittee shall limit Non-Emergency Operating Hours <= 100 hours per year. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.40.12	On each day of operation, the Permittee shall operate EQUI 120 between the hours of 1:00pm and 4:00pm for maintenance testing. [Minn. R. 7007.0800, subp. 2(A)]
5.40.13	The Permittee shall keep records of fuel type and usage on a monthly basis. [Minn. R. 7007.0800, subp. 5]

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 87 of 672

Requirement number	Requirement and citation
5.40.14	Hours of Operation: The Permittee shall maintain documentation on site that the unit is an emergency generator by design that qualifies under the U.S. EPA memorandum entitled "Calculating Potential to Emit (PTE) for Emergency Generators" dated September 6, 1995, limiting operation to 500 hours per year. [Minn. R. 7007.0800, subps. 4-5]
5.40.15	Fuel type: No. 2 fuel oil/diesel fuel meeting the requirements of 40 CFR Section 1090.305 only by design. [40 CFR 60.4207(b), Minn. R. 7005.0100, subp. 35a]
5.40.16	Fuel Supplier Certification: The Permittee shall obtain and maintain a fuel supplier certification for each shipment of diesel fuel oil, certifying that the sulfur content does not exceed 0.0015 percent by weight. [Minn. R. 7007.0800, subps. 4-5]
5.40.17	<p>The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. IIII as follows:</p> <p>40 CFR 60.4200(a)(2)(i); 40 CFR 60.4200(c); 40 CFR 60.4202(a)(2); 40 CFR 60.4205(b); 40 CFR 60.4207(b); 40 CFR 60.4208(a); 40 CFR 60.4209(a); 40 CFR 60.4211(a); 40 CFR 60.4211(c); 40 CFR 60.4211(f); 40 CFR 60.4214(b); 40 CFR 60.4218; 40 CFR 60.4219; and 40 CFR pt. 60, subp. IIII, Table 8.</p> <p>A copy of 40 CFR pt. 60, subp. IIII is included in Appendix K. If the standard changes or upon adoption of a new or amended federal applicable requirement, and if there are more than 3 years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [40 CFR pt. 60, subp. IIII, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.2305]</p>
5.40.18	<p>The Permittee must comply with all applicable requirements of 40 CFR pt. 60, subp. A as follows:</p> <p>40 CFR 60.1(a); 40 CFR 60.1(b); 40 CFR 60.1(c); 40 CFR 60.2; 40 CFR 60.3; 40 CFR 60.4; 40 CFR 60.5(a); 40 CFR 60.5(b); 40 CFR 60.6(a); 40 CFR 60.6(b); 40 CFR 60.7(a)(1); 40 CFR 60.7(a)(3); 40 CFR 60.7(a)(4); 40 CFR 60.7(a)(5); 40 CFR 60.7(a)(6); 40 CFR 60.7(a)(7); 40 CFR 60.7(b); 40 CFR 60.7(c); 40 CFR 60.7(d); 40 CFR 60.8(a); 40 CFR 60.8(b); 40 CFR 60.8(c); 40 CFR 60.8(d); 40 CFR 60.8(e); 40 CFR 60.8(f); 40 CFR 60.8(g); 40 CFR 60.8(h); 40 CFR 60.8(i); 40 CFR 60.9; 40 CFR 60.11(a); 40 CFR 60.11(b); 40 CFR 60.11(c); 40 CFR 60.11(d); 40 CFR 60.11(e)(1); 40 CFR 60.11(e)(2); 40 CFR 60.11(e)(3); 40 CFR 60.11(e)(4); 40 CFR 60.11(e)(5); 40 CFR 60.11(e)(6); 40 CFR 60.11(e)(7); 40 CFR 60.11(e)(8); 40 CFR 60.11(f); 40 CFR 60.11(g); 40 CFR 60.12; 40 CFR 60.13(a); 40 CFR 60.13(b); 40 CFR 60.13(c); 40 CFR 60.13(d)(1); 40 CFR 60.13(d)(2); 40 CFR 60.13(e)(1); 40 CFR 60.13(e)(2); 40 CFR 60.13(f); 40 CFR 60.13(g); 40 CFR 60.13(h)(1); 40 CFR 60.13(h)(2); 40 CFR 60.13(h)(3); 40 CFR 60.13(i)(1); 40 CFR 60.13(i)(2); 40 CFR 60.13(i)(3); 40 CFR 60.13(i)(4); 40 CFR 60.13(i)(5); 40 CFR 60.13(i)(6); 40 CFR 60.13(i)(7); 40 CFR 60.13(i)(8); 40 CFR 60.13(i)(9); 40 CFR 60.13(j)(1); 40 CFR 60.13(j)(2); 40 CFR 60.14(a); 40 CFR 60.14(b); 40 CFR 60.14(c); 40 CFR 60.14(e); 40 CFR 60.14(f); 40 CFR 60.14(g); 40 CFR 60.14(h); 40 CFR 60.14(i); 40 CFR 60.14(j); 40 CFR 60.14(k); 40 CFR 60.14(l); 40 CFR 60.15(a); 40 CFR 60.15(b); 40 CFR 60.15(c); 40 CFR 60.15(d); 40 CFR 60.15(e); 40 CFR 60.15(f); 40 CFR 60.15(g); 40 CFR 60.17; 40 CFR 60.18(b)-(f); 40 CFR 60.18(g)-(i); 40 CFR 60.19(a); 40 CFR 60.19(b); 40 CFR 60.19(c); 40 CFR 60.19(d); 40 CFR 60.19(e); 40 CFR 60.19(f)(1); 40 CFR 60.19(f)(2); 40 CFR 60.19(f)(3); and 40 CFR 60.19(f)(4).</p> <p>A copy of 40 CFR pt. 60, subp. A is included in Appendix L. If the standard changes or upon adoption of a new or amended federal applicable requirement, and if there are more than 3 years remaining in the permit term, the Permittee shall file an application for an amendment within nine months of promulgation of the applicable requirement, pursuant to Minn. R. 7007.0400, subp. 3. [40 CFR pt. 60, subp. A, Minn. R. 7007.0400, subp. 3, Minn. R. 7007.1150-7007.1500, Minn. R. 7011.0050, Minn. R. 7017.1010 & 7017.2025, Minn. R. 7019.0100]</p>
5.40.19	EQUI 120 is a new affected source as defined under 40 CFR pt. 63, subp. ZZZZ, and the facility is an area source as defined at 40 CFR Section 63.2. The Permittee shall meet the requirements of 40 CFR pt. 63, subp. ZZZZ by meeting the requirements of 40 CFR pt. 60, subp. IIII. No further requirements of 40 CFR pt. 63, subp. ZZZZ apply to EQUI 120. [40 CFR 63.6590(c), Minn. R. 7011.8150]

Requirement number	Requirement and citation
EQUI 121	Die Cast (DC09)
5.41.1	The Permittee must limit Process Throughput \leq 290.53 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.41.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 121, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 121 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.41.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 121 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.41.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 121 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.41.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI121PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI121FPM10} = (A \times B \times 0.05) / 24$ <p>Where:</p> <p>EQUI121PM10 = daily average PM10 stack emissions from EQUI 121, in pounds/hour; EQUI121FPM10 = daily average uncaptured PM10 emissions from EQUI 121, in pounds/hour; A = total weight of lead-containing material processed by EQUI 121 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 121 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.41.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI121PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI121FPM2.5} = (A \times C \times 0.05) / 24$ <p>Where:</p> <p>EQUI121PM2.5 = daily average PM2.5 stack emissions from EQUI 121, in pounds/hour; EQUI121FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 121, in pounds/hour; A = total weight of lead-containing material processed by EQUI 121 for the previous operating day, in pounds/day;</p>

Requirement number	Requirement and citation
	C = uncontrolled PM2.5 emission factor for EQUI 121 listed in Appendix D, as a fraction; and CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.41.7	Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI121L = D \times E$ $EQUI121FL = D \times H \times 0.05$ Where: EQUI121L = total lead stack emissions from EQUI 121, in pounds/day; EQUI121FL = total uncaptured lead emissions from EQUI 121, in pounds/day; D = total weight of lead-containing material processed by EQUI 121 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 121 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 121 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.41.8	The Permittee shall vent captured emissions from EQUI 121 to control equipment meeting the requirements of TREA 25 and TREA 61 operated in-series, and COMG 12 whenever EQUI 121 operates. The emissions from EQUI 121 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.41.9	The Permittee shall vent captured emissions from EQUI 121 to a stack/vent meeting the requirements of STRU 15 whenever EQUI 121 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.41.10	The Permittee shall vent uncaptured emissions from EQUI 121 to a stack/vent meeting the requirements of STRU 48 whenever EQUI 121 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.41.11	PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1. The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test. The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.41.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.41.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of

Requirement number	Requirement and citation
	preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
5.41.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.41.15	PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.41.16	PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
5.41.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.41.18	Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.41.19	Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
EQUI 122	Die Cast (DC12)

Requirement number	Requirement and citation
5.42.1	The Permittee must limit Process Throughput <= 872.10 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.42.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 122, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 122 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.42.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 122 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.42.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 122 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.42.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI122PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI122FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI122PM10 = daily average PM10 stack emissions from EQUI 122, in pounds/hour; EQUI122FPM10 = daily average uncaptured PM10 emissions from EQUI 122, in pounds/hour; A = total weight of lead-containing material processed by EQUI 122 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 122 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.42.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI122PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI122FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI122PM2.5 = daily average PM2.5 stack emissions from EQUI 122, in pounds/hour; EQUI122FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 122, in pounds/hour; A = total weight of lead-containing material processed by EQUI 122 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 122 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.42.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI122L = D \times E$ $EQUI122FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI122L = total lead stack emissions from EQUI 122, in pounds/day; EQUI122FL = total uncaptured lead emissions from EQUI 122, in pounds/day; D = total weight of lead-containing material processed by EQUI 122 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 122 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 122 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.42.8	The Permittee shall vent captured emissions from EQUI 122 to control equipment meeting the requirements of TREA 25 and TREA 61 operated in-series, and COMG 12 whenever EQUI 122 operates. The emissions from EQUI 122 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.42.9	The Permittee shall vent captured emissions from EQUI 122 to a stack/vent meeting the requirements of STRU 15 whenever EQUI 122 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.42.10	The Permittee shall vent uncaptured emissions from EQUI 122 to a stack/vent meeting the requirements of STRU 48 whenever EQUI 122 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.42.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.42.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.42.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.42.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.42.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.42.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.42.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.42.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.42.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 123	Die Cast (DC33)

Requirement number	Requirement and citation
5.43.1	The Permittee must limit Process Throughput ≤ 401.24 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.43.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 123, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 123 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.43.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 123 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.43.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 123 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.43.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI123PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI123FPM10} = (A \times B \times 0.05) / 24$ <p>Where:</p> <p>EQUI123PM10 = daily average PM10 stack emissions from EQUI 123, in pounds/hour; EQUI123FPM10 = daily average uncaptured PM10 emissions from EQUI 123, in pounds/hour; A = total weight of lead-containing material processed by EQUI 123 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 123 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.43.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI123PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI123FPM2.5} = (A \times C \times 0.05) / 24$ <p>Where:</p> <p>EQUI123PM2.5 = daily average PM2.5 stack emissions from EQUI 123, in pounds/hour; EQUI123FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 123, in pounds/hour; A = total weight of lead-containing material processed by EQUI 123 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 123 listed in Appendix D, as a fraction; and</p>

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.43.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI123L = D \times E$ $EQUI123FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI123L = total lead stack emissions from EQUI 123, in pounds/day; EQUI123FL = total uncaptured lead emissions from EQUI 123, in pounds/day; D = total weight of lead-containing material processed by EQUI 123 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 123 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 123 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.43.8	The Permittee shall vent captured emissions from EQUI 123 to control equipment meeting the requirements of TREA 25 and TREA 61 operated in-series, and COMG 12 whenever EQUI 123 operates. The emissions from EQUI 123 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.43.9	The Permittee shall vent captured emissions from EQUI 123 to a stack/vent meeting the requirements of STRU 15 whenever EQUI 123 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.43.10	The Permittee shall vent uncaptured emissions from EQUI 123 to a stack/vent meeting the requirements of STRU 49 whenever EQUI 123 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.43.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.43.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.43.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.43.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.43.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.43.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.43.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.43.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.43.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 124	Die Cast (DC14)

Requirement number	Requirement and citation
5.44.1	The Permittee must limit Process Throughput <= 500.01 pounds per day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.44.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 124, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 124 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.44.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 124 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.44.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 124 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.44.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI124PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI124FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI124PM10 = daily average PM10 stack emissions from EQUI 124, in pounds/hour; EQUI124FPM10 = daily average uncaptured PM10 emissions from EQUI 124, in pounds/hour; A = total weight of lead-containing material processed by EQUI 124 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 124 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.44.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI124PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI124FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI124PM2.5 = daily average PM2.5 stack emissions from EQUI 124, in pounds/hour; EQUI124FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 124, in pounds/hour; A = total weight of lead-containing material processed by EQUI 124 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 124 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.44.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI124L = D \times E$ $EQUI124FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI124L = total lead stack emissions from EQUI 124, in pounds/day; EQUI124FL = total uncaptured lead emissions from EQUI 124, in pounds/day; D = total weight of lead-containing material processed by EQUI 124 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 124 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 124 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.44.8	The Permittee shall vent captured emissions from EQUI 124 to control equipment meeting the requirements of TREA 26 and TREA 63 operated in-series, and COMG 12 whenever EQUI 124 operates. The emissions from EQUI 124 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.44.9	The Permittee shall vent captured emissions from EQUI 124 to a stack/vent meeting the requirements of STRU 16 whenever EQUI 124 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.44.10	The Permittee shall vent uncaptured emissions from EQUI 124 to a stack/vent meeting the requirements of STRU 43 whenever EQUI 124 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.44.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.44.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.44.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.44.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.44.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.44.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.44.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.44.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.44.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 125	Die Cast (DC15)

Requirement number	Requirement and citation
5.45.1	The Permittee must limit Process Throughput \leq 233.75 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.45.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 125, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 125 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.45.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 125 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.45.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 125 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.45.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI125PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI125FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI125PM10 = daily average PM10 stack emissions from EQUI 125, in pounds/hour; EQUI125FPM10 = daily average uncaptured PM10 emissions from EQUI 125, in pounds/hour; A = total weight of lead-containing material processed by EQUI 125 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 125 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.45.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI125PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI125FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI125PM2.5 = daily average PM2.5 stack emissions from EQUI 125, in pounds/hour; EQUI125FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 125, in pounds/hour; A = total weight of lead-containing material processed by EQUI 125 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 125 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.45.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: EQUI125L = D x E EQUI125FL = D x H x 0.05</p> <p>Where:</p> <p>EQUI125L = total lead stack emissions from EQUI 125, in pounds/day; EQUI125FL = total uncaptured lead emissions from EQUI 125, in pounds/day; D = total weight of lead-containing material processed by EQUI 125 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 125 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 125 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.45.8	The Permittee shall vent captured emissions from EQUI 125 to control equipment meeting the requirements of TREA 26 and TREA 63 operated in-series, and COMG 12 whenever EQUI 125 operates. The emissions from EQUI 125 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.45.9	The Permittee shall vent captured emissions from EQUI 125 to a stack/vent meeting the requirements of STRU 16 whenever EQUI 125 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.45.10	The Permittee shall vent uncaptured emissions from EQUI 125 to a stack/vent meeting the requirements of STRU 50 whenever EQUI 125 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.45.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.45.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.45.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.45.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.45.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.45.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.45.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.45.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.45.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 126	Die Cast (DC21)

Requirement number	Requirement and citation
5.46.1	The Permittee must limit Process Throughput \leq 530.77 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.46.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 126, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 126 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.46.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 126 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.46.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 126 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.46.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI126PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI126FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI126PM10 = daily average PM10 stack emissions from EQUI 126, in pounds/hour; EQUI126FPM10 = daily average uncaptured PM10 emissions from EQUI 126, in pounds/hour; A = total weight of lead-containing material processed by EQUI 126 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 126 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.46.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI126PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI126FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI126PM2.5 = daily average PM2.5 stack emissions from EQUI 126, in pounds/hour; EQUI126FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 126, in pounds/hour; A = total weight of lead-containing material processed by EQUI 126 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 126 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.46.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI126L = D \times E$ $EQUI126FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI126L = total lead stack emissions from EQUI 126, in pounds/day; EQUI126FL = total uncaptured lead emissions from EQUI 126, in pounds/day; D = total weight of lead-containing material processed by EQUI 126 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 126 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 126 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.46.8	The Permittee shall vent captured emissions from EQUI 126 to control equipment meeting the requirements of TREA 26 and TREA 62 operated in-series, and COMG 12 whenever EQUI 126 operates. The emissions from EQUI 126 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.46.9	The Permittee shall vent captured emissions from EQUI 126 to a stack/vent meeting the requirements of STRU 16 whenever EQUI 126 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.46.10	The Permittee shall vent uncaptured emissions from EQUI 126 to a stack/vent meeting the requirements of STRU 50 whenever EQUI 126 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.46.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.46.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.46.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.46.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.46.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.46.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.46.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.46.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.46.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 127	Die Cast (DC08)

Requirement number	Requirement and citation
5.47.1	The Permittee must limit Process Throughput <= 129.56 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.47.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 127, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 127 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.47.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 127 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.47.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 127 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.47.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI127PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI127FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI127PM10 = daily average PM10 stack emissions from EQUI 127, in pounds/hour; EQUI127FPM10 = daily average uncaptured PM10 emissions from EQUI 127, in pounds/hour; A = total weight of lead-containing material processed by EQUI 127 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 127 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.47.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI127PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI127FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI127PM2.5 = daily average PM2.5 stack emissions from EQUI 127, in pounds/hour; EQUI127FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 127, in pounds/hour; A = total weight of lead-containing material processed by EQUI 127 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 127 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.47.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI127L = D \times E$ $EQUI127FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI127L = total lead stack emissions from EQUI 127, in pounds/day; EQUI127FL = total uncaptured lead emissions from EQUI 127, in pounds/day; D = total weight of lead-containing material processed by EQUI 127 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 127 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 127 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.47.8	The Permittee shall vent captured emissions from EQUI 127 to control equipment meeting the requirements of TREA 27 and TREA 64 operated in-series, and COMG 12 whenever EQUI 127 operates. The emissions from EQUI 127 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.47.9	The Permittee shall vent captured emissions from EQUI 127 to a stack/vent meeting the requirements of STRU 17 whenever EQUI 127 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.47.10	The Permittee shall vent uncaptured emissions from EQUI 127 to a stack/vent meeting the requirements of STRU 47 whenever EQUI 127 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.47.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.47.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.47.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.47.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.47.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.47.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.47.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.47.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.47.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 128	Die Cast (DC10)

Requirement number	Requirement and citation
5.48.1	The Permittee must limit Process Throughput <= 399.71 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.48.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 128, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 128 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.48.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 128 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.48.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 128 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.48.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI128PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI128FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI128PM10 = daily average PM10 stack emissions from EQUI 128, in pounds/hour; EQUI128FPM10 = daily average uncaptured PM10 emissions from EQUI 128, in pounds/hour; A = total weight of lead-containing material processed by EQUI 128 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 128 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.48.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI128PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI128FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI128PM2.5 = daily average PM2.5 stack emissions from EQUI 128, in pounds/hour; EQUI128FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 128, in pounds/hour; A = total weight of lead-containing material processed by EQUI 128 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 128 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.48.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI128L = D \times E$ $EQUI128FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI128L = total lead stack emissions from EQUI 128, in pounds/day; EQUI128FL = total uncaptured lead emissions from EQUI 128, in pounds/day; D = total weight of lead-containing material processed by EQUI 128 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 128 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 128 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.48.8	The Permittee shall vent captured emissions from EQUI 128 to control equipment meeting the requirements of TREA 27 and TREA 64 operated in-series, and COMG 12 whenever EQUI 128 operates. The emissions from EQUI 128 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.48.9	The Permittee shall vent captured emissions from EQUI 128 to a stack/vent meeting the requirements of STRU 17 whenever EQUI 128 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.48.10	The Permittee shall vent uncaptured emissions from EQUI 128 to a stack/vent meeting the requirements of STRU 47 whenever EQUI 128 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.48.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.48.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.48.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.48.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.48.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.48.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.48.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.48.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.48.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 129	Die Cast (DC17)

Requirement number	Requirement and citation
5.49.1	The Permittee must limit Process Throughput <= 220.83 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.49.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 129, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 129 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.49.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 129 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.49.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 129 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.49.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI129PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI129FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI129PM10 = daily average PM10 stack emissions from EQUI 129, in pounds/hour; EQUI129FPM10 = daily average uncaptured PM10 emissions from EQUI 129, in pounds/hour; A = total weight of lead-containing material processed by EQUI 129 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 129 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.49.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI129PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI129FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI129PM2.5 = daily average PM2.5 stack emissions from EQUI 129, in pounds/hour; EQUI129FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 129, in pounds/hour; A = total weight of lead-containing material processed by EQUI 129 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 129 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.49.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI129L = D \times E$ $EQUI129FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI129L = total lead stack emissions from EQUI 129, in pounds/day; EQUI129FL = total uncaptured lead emissions from EQUI 129, in pounds/day; D = total weight of lead-containing material processed by EQUI 129 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 129 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 129 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.49.8	The Permittee shall vent captured emissions from EQUI 129 to control equipment meeting the requirements of TREA 27 and TREA 64 operated in-series, and COMG 12 whenever EQUI 129 operates. The emissions from EQUI 129 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.49.9	The Permittee shall vent captured emissions from EQUI 129 to a stack/vent meeting the requirements of STRU 17 whenever EQUI 129 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.49.10	The Permittee shall vent uncaptured emissions from EQUI 129 to a stack/vent meeting the requirements of STRU 47 whenever EQUI 129 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.49.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.49.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.49.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.49.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.49.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.49.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.49.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.49.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.49.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 130	Die Cast (DC18)

Requirement number	Requirement and citation
5.50.1	The Permittee must limit Process Throughput <= 204.30 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.50.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 130, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 130 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.50.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 130 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.50.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 130 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.50.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI130PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI130FPM10} = (A \times B \times 0.05) / 24$ <p>Where:</p> <p>EQUI130PM10 = daily average PM10 stack emissions from EQUI 130, in pounds/hour; EQUI130FPM10 = daily average uncaptured PM10 emissions from EQUI 130, in pounds/hour; A = total weight of lead-containing material processed by EQUI 130 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 130 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.50.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI130PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI130FPM2.5} = (A \times C \times 0.05) / 24$ <p>Where:</p> <p>EQUI130PM2.5 = daily average PM2.5 stack emissions from EQUI 130, in pounds/hour; EQUI130FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 130, in pounds/hour; A = total weight of lead-containing material processed by EQUI 130 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 130 listed in Appendix D, as a fraction; and</p>

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.50.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI130L = D \times E$ $EQUI130FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI130L = total lead stack emissions from EQUI 130, in pounds/day; EQUI130FL = total uncaptured lead emissions from EQUI 130, in pounds/day; D = total weight of lead-containing material processed by EQUI 130 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 130 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 130 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.50.8	The Permittee shall vent captured emissions from EQUI 130 to control equipment meeting the requirements of TREA 78 and TREA 65 operated in-series, and COMG 12 whenever EQUI 130 operates. The emissions from EQUI 130 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.50.9	The Permittee shall vent captured emissions from EQUI 130 to a stack/vent meeting the requirements of STRU 74 whenever EQUI 130 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.50.10	The Permittee shall vent uncaptured emissions from EQUI 130 to a stack/vent meeting the requirements of STRU 44 whenever EQUI 130 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.50.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.50.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.50.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.50.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.50.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.50.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.50.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.50.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.50.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 131	Die Cast (DC36)

Requirement number	Requirement and citation
5.51.1	The Permittee must limit Process Throughput <= 634.27 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.51.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 131, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 131 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.51.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 131 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.51.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 131 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.51.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI131PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI131FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI131PM10 = daily average PM10 stack emissions from EQUI 131, in pounds/hour; EQUI131FPM10 = daily average uncaptured PM10 emissions from EQUI 131, in pounds/hour; A = total weight of lead-containing material processed by EQUI 131 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 131 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.51.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI131PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI131FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI131PM2.5 = daily average PM2.5 stack emissions from EQUI 131, in pounds/hour; EQUI131FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 131, in pounds/hour; A = total weight of lead-containing material processed by EQUI 131 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 131 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.51.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI131L = D \times E$ $EQUI131FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI131L = total lead stack emissions from EQUI 131, in pounds/day; EQUI131FL = total uncaptured lead emissions from EQUI 131, in pounds/day; D = total weight of lead-containing material processed by EQUI 131 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 131 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 131 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.51.8	The Permittee shall vent captured emissions from EQUI 131 to control equipment meeting the requirements of TREA 78 and TREA 65 operated in-series, and COMG 12 whenever EQUI 131 operates. The emissions from EQUI 131 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.51.9	The Permittee shall vent captured emissions from EQUI 131 to a stack/vent meeting the requirements of STRU 74 whenever EQUI 131 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.51.10	The Permittee shall vent uncaptured emissions from EQUI 131 to a stack/vent meeting the requirements of STRU 44 whenever EQUI 131 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.51.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.51.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.51.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.51.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.51.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.51.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.51.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.51.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.51.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 132	Die Cast (DC37)

Requirement number	Requirement and citation
5.52.1	The Permittee must limit Process Throughput <= 552.50 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.52.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 132, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 132 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.52.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 132 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.52.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 132 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.52.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI132PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI132FPM10} = (A \times B \times 0.05) / 24$ <p>Where:</p> <p>EQUI132PM10 = daily average PM10 stack emissions from EQUI 132, in pounds/hour; EQUI132FPM10 = daily average uncaptured PM10 emissions from EQUI 132, in pounds/hour; A = total weight of lead-containing material processed by EQUI 132 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 132 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.52.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI132PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI132FPM2.5} = (A \times C \times 0.05) / 24$ <p>Where:</p> <p>EQUI132PM2.5 = daily average PM2.5 stack emissions from EQUI 132, in pounds/hour; EQUI132FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 132, in pounds/hour; A = total weight of lead-containing material processed by EQUI 132 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 132 listed in Appendix D, as a fraction; and</p>

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.52.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: EQUI132L = D x E EQUI132FL = D x H x 0.05</p> <p>Where:</p> <p>EQUI132L = total lead stack emissions from EQUI 132, in pounds/day; EQUI132FL = total uncaptured lead emissions from EQUI 132, in pounds/day; D = total weight of lead-containing material processed by EQUI 132 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 132 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 132 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.52.8	The Permittee shall vent captured emissions from EQUI 132 to control equipment meeting the requirements of TREA 30 and TREA 66 operated in-series, and COMG 12 whenever EQUI 132 operates. The emissions from EQUI 132 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.52.9	The Permittee shall vent captured emissions from EQUI 132 to a stack/vent meeting the requirements of STRU 20 whenever EQUI 132 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.52.10	The Permittee shall vent uncaptured emissions from EQUI 132 to a stack/vent meeting the requirements of STRU 44 whenever EQUI 132 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.52.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.52.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.52.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.52.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.52.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.52.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.52.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.52.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.52.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 133	Die Cast (DC25)

Requirement number	Requirement and citation
5.53.1	The Permittee must limit Process Throughput <= 462.53 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.53.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 133, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 133 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.53.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 133 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.53.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 133 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.53.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI133PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI133FPM10} = (A \times B \times 0.05) / 24$ <p>Where:</p> <p>EQUI133PM10 = daily average PM10 stack emissions from EQUI 133, in pounds/hour; EQUI133FPM10 = daily average uncaptured PM10 emissions from EQUI 133, in pounds/hour; A = total weight of lead-containing material processed by EQUI 133 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 133 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.53.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI133PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI133FPM2.5} = (A \times C \times 0.05) / 24$ <p>Where:</p> <p>EQUI133PM2.5 = daily average PM2.5 stack emissions from EQUI 133, in pounds/hour; EQUI133FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 133, in pounds/hour; A = total weight of lead-containing material processed by EQUI 133 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 133 listed in Appendix D, as a fraction; and</p>

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.53.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: EQUI133L = D x E EQUI133FL = D x H x 0.05</p> <p>Where:</p> <p>EQUI133L = total lead stack emissions from EQUI 133, in pounds/day; EQUI133FL = total uncaptured lead emissions from EQUI 133, in pounds/day; D = total weight of lead-containing material processed by EQUI 133 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 133 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 133 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.53.8	The Permittee shall vent captured emissions from EQUI 133 to control equipment meeting the requirements of TREA 30 and TREA 66 operated in-series, and COMG 12 whenever EQUI 133 operates. The emissions from EQUI 133 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.53.9	The Permittee shall vent captured emissions from EQUI 133 to a stack/vent meeting the requirements of STRU 20 whenever EQUI 133 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.53.10	The Permittee shall vent uncaptured emissions from EQUI 133 to a stack/vent meeting the requirements of STRU 44 whenever EQUI 133 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.53.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.53.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.53.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.53.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.53.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.53.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.53.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.53.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.53.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 134	Die Cast (DC22)

Requirement number	Requirement and citation
5.54.1	The Permittee must limit Process Throughput <= 452.85 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.54.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 134, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 134 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.54.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 134 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.54.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 134 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.54.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI134PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI134FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI134PM10 = daily average PM10 stack emissions from EQUI 134, in pounds/hour; EQUI134FPM10 = daily average uncaptured PM10 emissions from EQUI 134, in pounds/hour; A = total weight of lead-containing material processed by EQUI 134 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 134 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.54.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI134PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI134FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI134PM2.5 = daily average PM2.5 stack emissions from EQUI 134, in pounds/hour; EQUI134FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 134, in pounds/hour; A = total weight of lead-containing material processed by EQUI 134 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 134 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.54.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI134L = D \times E$ $EQUI134FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI134L = total lead stack emissions from EQUI 134, in pounds/day; EQUI134FL = total uncaptured lead emissions from EQUI 134, in pounds/day; D = total weight of lead-containing material processed by EQUI 134 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 134 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 134 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.54.8	The Permittee shall vent captured emissions from EQUI 134 to control equipment meeting the requirements of TREA 79 and TREA 67 operated in-series, and COMG 12 whenever EQUI 134 operates. The emissions from EQUI 134 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.54.9	The Permittee shall vent captured emissions from EQUI 134 to a stack/vent meeting the requirements of STRU 75 whenever EQUI 134 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.54.10	The Permittee shall vent uncaptured emissions from EQUI 134 to a stack/vent meeting the requirements of STRU 44 whenever EQUI 134 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.54.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.54.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.54.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.54.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.54.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.54.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.54.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.54.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.54.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 135	Die Cast (DC35)

Requirement number	Requirement and citation
5.55.1	The Permittee must limit Process Throughput <= 893.96 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.55.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 135, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 135 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.55.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 135 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.55.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 135 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.55.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI135PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI135FPM10} = (A \times B \times 0.05) / 24$ <p>Where:</p> <p>EQUI135PM10 = daily average PM10 stack emissions from EQUI 135, in pounds/hour; EQUI135FPM10 = daily average uncaptured PM10 emissions from EQUI 135, in pounds/hour; A = total weight of lead-containing material processed by EQUI 135 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 135 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.55.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI135PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI135FPM2.5} = (A \times C \times 0.05) / 24$ <p>Where:</p> <p>EQUI135PM2.5 = daily average PM2.5 stack emissions from EQUI 135, in pounds/hour; EQUI135FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 135, in pounds/hour; A = total weight of lead-containing material processed by EQUI 135 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 135 listed in Appendix D, as a fraction; and</p>

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.55.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI135L = D \times E$ $EQUI135FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI135L = total lead stack emissions from EQUI 135, in pounds/day; EQUI135FL = total uncaptured lead emissions from EQUI 135, in pounds/day; D = total weight of lead-containing material processed by EQUI 135 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 135 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 135 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.55.8	The Permittee shall vent captured emissions from EQUI 135 to control equipment meeting the requirements of TREA 79 and TREA 67 operated in-series, and COMG 12 whenever EQUI 135 operates. The emissions from EQUI 135 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.55.9	The Permittee shall vent captured emissions from EQUI 135 to a stack/vent meeting the requirements of STRU 75 whenever EQUI 135 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.55.10	The Permittee shall vent uncaptured emissions from EQUI 135 to a stack/vent meeting the requirements of STRU 44 whenever EQUI 135 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.55.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.55.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.55.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.55.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.55.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.55.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.55.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.55.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.55.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 136	Die Cast (DC32)

Requirement number	Requirement and citation
5.56.1	The Permittee must limit Process Throughput <= 893.96 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.56.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 136, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 136 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.56.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 136 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.56.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 136 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.56.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI136PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI136FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI136PM10 = daily average PM10 stack emissions from EQUI 136, in pounds/hour; EQUI136FPM10 = daily average uncaptured PM10 emissions from EQUI 136, in pounds/hour; A = total weight of lead-containing material processed by EQUI 136 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 136 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.56.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI136PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI136FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI136PM2.5 = daily average PM2.5 stack emissions from EQUI 136, in pounds/hour; EQUI136FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 136, in pounds/hour; A = total weight of lead-containing material processed by EQUI 136 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 136 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.56.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI136L = D \times E$ $EQUI136FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI136L = total lead stack emissions from EQUI 136, in pounds/day; EQUI136FL = total uncaptured lead emissions from EQUI 136, in pounds/day; D = total weight of lead-containing material processed by EQUI 136 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 136 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 136 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.56.8	The Permittee shall vent captured emissions from EQUI 136 to control equipment meeting the requirements of TREA 33 and TREA 68 operated in-series, and COMG 12 whenever EQUI 136 operates. The emissions from EQUI 136 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.56.9	The Permittee shall vent captured emissions from EQUI 136 to a stack/vent meeting the requirements of STRU 23 whenever EQUI 136 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.56.10	The Permittee shall vent uncaptured emissions from EQUI 136 to a stack/vent meeting the requirements of STRU 44 whenever EQUI 136 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.56.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.56.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.56.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.56.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.56.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.56.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.56.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.56.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.56.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 137	Die Cast (DC26)

Requirement number	Requirement and citation
5.57.1	The Permittee must limit Process Throughput <= 330.59 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.57.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 137, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 137 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.57.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 137 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.57.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 137 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.57.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI137PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI137FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI137PM10 = daily average PM10 stack emissions from EQUI 137, in pounds/hour; EQUI137FPM10 = daily average uncaptured PM10 emissions from EQUI 137, in pounds/hour; A = total weight of lead-containing material processed by EQUI 137 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 137 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.57.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI137PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI137FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI137PM2.5 = daily average PM2.5 stack emissions from EQUI 137, in pounds/hour; EQUI137FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 137, in pounds/hour; A = total weight of lead-containing material processed by EQUI 137 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 137 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.57.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI137L = D \times E$ $EQUI137FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI137L = total lead stack emissions from EQUI 137, in pounds/day; EQUI137FL = total uncaptured lead emissions from EQUI 137, in pounds/day; D = total weight of lead-containing material processed by EQUI 137 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 137 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 137 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.57.8	The Permittee shall vent captured emissions from EQUI 137 to control equipment meeting the requirements of TREA 34 and TREA 69 operated in-series, and COMG 12 whenever EQUI 137 operates. The emissions from EQUI 137 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.57.9	The Permittee shall vent captured emissions from EQUI 137 to a stack/vent meeting the requirements of STRU 24 whenever EQUI 137 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.57.10	The Permittee shall vent uncaptured emissions from EQUI 137 to a stack/vent meeting the requirements of STRU 45 whenever EQUI 137 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.57.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.57.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.57.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.57.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.57.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.57.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.57.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.57.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.57.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 138	Die Cast (DC27)

Requirement number	Requirement and citation
5.58.1	The Permittee must limit Process Throughput <= 555.28 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.58.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 138, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 138 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.58.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 138 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.58.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 138 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.58.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI138PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI138FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI138PM10 = daily average PM10 stack emissions from EQUI 138, in pounds/hour; EQUI138FPM10 = daily average uncaptured PM10 emissions from EQUI 138, in pounds/hour; A = total weight of lead-containing material processed by EQUI 138 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 138 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.58.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI138PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI138FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI138PM2.5 = daily average PM2.5 stack emissions from EQUI 138, in pounds/hour; EQUI138FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 138, in pounds/hour; A = total weight of lead-containing material processed by EQUI 138 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 138 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.58.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI138L = D \times E$ $EQUI138FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI138L = total lead stack emissions from EQUI 138, in pounds/day; EQUI138FL = total uncaptured lead emissions from EQUI 138, in pounds/day; D = total weight of lead-containing material processed by EQUI 138 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 138 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 138 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.58.8	The Permittee shall vent captured emissions from EQUI 138 to control equipment meeting the requirements of TREA 34 and TREA 69 operated in-series, and COMG 12 whenever EQUI 138 operates. The emissions from EQUI 138 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.58.9	The Permittee shall vent captured emissions from EQUI 138 to a stack/vent meeting the requirements of STRU 24 whenever EQUI 138 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.58.10	The Permittee shall vent uncaptured emissions from EQUI 138 to a stack/vent meeting the requirements of STRU 45 whenever EQUI 138 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.58.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.58.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.58.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.58.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.58.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.58.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.58.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.58.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.58.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 139	Die Cast (DC16)

Requirement number	Requirement and citation
5.59.1	The Permittee must limit Process Throughput <= 596.70 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.59.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 139, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 139 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.59.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 139 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.59.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 139 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.59.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI139PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI139FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI139PM10 = daily average PM10 stack emissions from EQUI 139, in pounds/hour; EQUI139FPM10 = daily average uncaptured PM10 emissions from EQUI 139, in pounds/hour; A = total weight of lead-containing material processed by EQUI 139 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 139 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.59.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI139PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI139FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI139PM2.5 = daily average PM2.5 stack emissions from EQUI 139, in pounds/hour; EQUI139FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 139, in pounds/hour; A = total weight of lead-containing material processed by EQUI 139 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 139 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.59.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI139L = D \times E$ $EQUI139FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI139L = total lead stack emissions from EQUI 139, in pounds/day; EQUI139FL = total uncaptured lead emissions from EQUI 139, in pounds/day; D = total weight of lead-containing material processed by EQUI 139 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 139 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 139 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.59.8	The Permittee shall vent captured emissions from EQUI 139 to control equipment meeting the requirements of TREA 35 and TREA 70 operated in-series, and COMG 12 whenever EQUI 139 operates. The emissions from EQUI 139 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.59.9	The Permittee shall vent captured emissions from EQUI 139 to a stack/vent meeting the requirements of STRU 25 whenever EQUI 139 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.59.10	The Permittee shall vent uncaptured emissions from EQUI 139 to a stack/vent meeting the requirements of STRU 45 whenever EQUI 139 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.59.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.59.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.59.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.59.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.59.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.59.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.59.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.59.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.59.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 140	Die Cast (DC28)

Requirement number	Requirement and citation
5.60.1	The Permittee must limit Process Throughput <= 465.62 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.60.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 140, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 140 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.60.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 140 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.60.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 140 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.60.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI140PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI140FPM10} = (A \times B \times 0.05) / 24$ <p>Where:</p> <p>EQUI140PM10 = daily average PM10 stack emissions from EQUI 140, in pounds/hour; EQUI140FPM10 = daily average uncaptured PM10 emissions from EQUI 140, in pounds/hour; A = total weight of lead-containing material processed by EQUI 140 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 140 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.60.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI140PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI140FPM2.5} = (A \times C \times 0.05) / 24$ <p>Where:</p> <p>EQUI140PM2.5 = daily average PM2.5 stack emissions from EQUI 140, in pounds/hour; EQUI140FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 140, in pounds/hour; A = total weight of lead-containing material processed by EQUI 140 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 140 listed in Appendix D, as a fraction; and</p>

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.60.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI140L = D \times E$ $EQUI140FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI140L = total lead stack emissions from EQUI 140, in pounds/day; EQUI140FL = total uncaptured lead emissions from EQUI 140, in pounds/day; D = total weight of lead-containing material processed by EQUI 140 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 140 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 140 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.60.8	The Permittee shall vent captured emissions from EQUI 140 to control equipment meeting the requirements of TREA 35 and TREA 70 operated in-series, and COMG 12 whenever EQUI 140 operates. The emissions from EQUI 140 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.60.9	The Permittee shall vent captured emissions from EQUI 140 to a stack/vent meeting the requirements of STRU 25 whenever EQUI 140 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.60.10	The Permittee shall vent uncaptured emissions from EQUI 140 to a stack/vent meeting the requirements of STRU 45 whenever EQUI 140 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.60.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.60.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.60.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.60.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.60.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.60.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.60.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.60.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.60.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 141	Die Cast (DC29)

Requirement number	Requirement and citation
5.61.1	The Permittee must limit Process Throughput <= 740.14 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.61.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 141, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 141 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.61.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 141 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.61.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 141 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.61.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI141PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI141FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI141PM10 = daily average PM10 stack emissions from EQUI 141, in pounds/hour; EQUI141FPM10 = daily average uncaptured PM10 emissions from EQUI 141, in pounds/hour; A = total weight of lead-containing material processed by EQUI 141 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 141 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.61.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI141PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI141FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI141PM2.5 = daily average PM2.5 stack emissions from EQUI 141, in pounds/hour; EQUI141FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 141, in pounds/hour; A = total weight of lead-containing material processed by EQUI 141 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 141 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.61.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI141L = D \times E$ $EQUI141FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI141L = total lead stack emissions from EQUI 141, in pounds/day; EQUI141FL = total uncaptured lead emissions from EQUI 141, in pounds/day; D = total weight of lead-containing material processed by EQUI 141 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 141 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 141 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.61.8	The Permittee shall vent captured emissions from EQUI 141 to control equipment meeting the requirements of TREA 36 and TREA 71 operated in-series, and COMG 12 whenever EQUI 141 operates. The emissions from EQUI 141 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.61.9	The Permittee shall vent captured emissions from EQUI 141 to a stack/vent meeting the requirements of STRU 26 whenever EQUI 141 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.61.10	The Permittee shall vent uncaptured emissions from EQUI 141 to a stack/vent meeting the requirements of STRU 45 whenever EQUI 141 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.61.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.61.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.61.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.61.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.61.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.61.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.61.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.61.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.61.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 142	Die Cast (DC19)

Requirement number	Requirement and citation
5.62.1	The Permittee must limit Process Throughput <= 555.90 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.62.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 142, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 142 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.62.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 142 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.62.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 142 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.62.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI142PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI142FPM10} = (A \times B \times 0.05) / 24$ <p>Where:</p> <p>EQUI142PM10 = daily average PM10 stack emissions from EQUI 142, in pounds/hour; EQUI142FPM10 = daily average uncaptured PM10 emissions from EQUI 142, in pounds/hour; A = total weight of lead-containing material processed by EQUI 142 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 142 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.62.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI142PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI142FPM2.5} = (A \times C \times 0.05) / 24$ <p>Where:</p> <p>EQUI142PM2.5 = daily average PM2.5 stack emissions from EQUI 142, in pounds/hour; EQUI142FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 142, in pounds/hour; A = total weight of lead-containing material processed by EQUI 142 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 142 listed in Appendix D, as a fraction; and</p>

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.62.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: EQUI142L = D x E EQUI142FL = D x H x 0.05</p> <p>Where:</p> <p>EQUI142L = total lead stack emissions from EQUI 142, in pounds/day; EQUI142FL = total uncaptured lead emissions from EQUI 142, in pounds/day; D = total weight of lead-containing material processed by EQUI 142 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 142 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 142 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.62.8	The Permittee shall vent captured emissions from EQUI 142 to control equipment meeting the requirements of TREA 36 and TREA 72 operated in-series, and COMG 12 whenever EQUI 142 operates. The emissions from EQUI 142 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.62.9	The Permittee shall vent captured emissions from EQUI 142 to a stack/vent meeting the requirements of STRU 26 whenever EQUI 142 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.62.10	The Permittee shall vent uncaptured emissions from EQUI 142 to a stack/vent meeting the requirements of STRU 46 whenever EQUI 142 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.62.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.62.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.62.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.62.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.62.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.62.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.62.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.62.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.62.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 143	Die Cast (DC34)

Requirement number	Requirement and citation
5.63.1	The Permittee must limit Process Throughput <= 462.53 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.63.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 143, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 143 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.63.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 143 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.63.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 143 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.63.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI143PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI143FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI143PM10 = daily average PM10 stack emissions from EQUI 143, in pounds/hour; EQUI143FPM10 = daily average uncaptured PM10 emissions from EQUI 143, in pounds/hour; A = total weight of lead-containing material processed by EQUI 143 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 143 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.63.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI143PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI143FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI143PM2.5 = daily average PM2.5 stack emissions from EQUI 143, in pounds/hour; EQUI143FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 143, in pounds/hour; A = total weight of lead-containing material processed by EQUI 143 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 143 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.63.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI143L = D \times E$ $EQUI143FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI143L = total lead stack emissions from EQUI 143, in pounds/day; EQUI143FL = total uncaptured lead emissions from EQUI 143, in pounds/day; D = total weight of lead-containing material processed by EQUI 143 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 143 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 143 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.63.8	The Permittee shall vent captured emissions from EQUI 143 to control equipment meeting the requirements of TREA 36 and TREA 71 operated in-series, and COMG 12 whenever EQUI 143 operates. The emissions from EQUI 143 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.63.9	The Permittee shall vent captured emissions from EQUI 143 to a stack/vent meeting the requirements of STRU 26 whenever EQUI 143 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.63.10	The Permittee shall vent uncaptured emissions from EQUI 143 to a stack/vent meeting the requirements of STRU 46 whenever EQUI 143 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.63.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.63.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.63.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.63.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.63.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.63.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.63.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.63.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.63.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 146	Die Cast (DC42)

Requirement number	Requirement and citation
5.64.1	The Permittee must limit Process Throughput <= 1199.66 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.64.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 146, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 146 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.64.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 146 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.64.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 146 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.64.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI146PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI146FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI146PM10 = daily average PM10 stack emissions from EQUI 146, in pounds/hour; EQUI146FPM10 = daily average uncaptured PM10 emissions from EQUI 146, in pounds/hour; A = total weight of lead-containing material processed by EQUI 146 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 146 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.64.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI146PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI146FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI146PM2.5 = daily average PM2.5 stack emissions from EQUI 146, in pounds/hour; EQUI146FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 146, in pounds/hour; A = total weight of lead-containing material processed by EQUI 146 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 146 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.64.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI146L = D \times E$ $EQUI146FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI146L = total lead stack emissions from EQUI 146, in pounds/day; EQUI146FL = total uncaptured lead emissions from EQUI 146, in pounds/day; D = total weight of lead-containing material processed by EQUI 146 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 146 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 146 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.64.8	The Permittee shall vent captured emissions from EQUI 146 to control equipment meeting the requirements of TREA 39 and TREA 73 operated in-series, and COMG 12 whenever EQUI 146 operates. The emissions from EQUI 146 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.64.9	The Permittee shall vent captured emissions from EQUI 146 to a stack/vent meeting the requirements of STRU 30 whenever EQUI 146 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.64.10	The Permittee shall vent uncaptured emissions from EQUI 146 to a stack/vent meeting the requirements of STRU 53 whenever EQUI 146 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.64.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.64.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.64.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.64.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.64.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.64.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.64.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.64.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.64.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 147	Die Cast (DC38)

Requirement number	Requirement and citation
5.65.1	The Permittee must limit Process Throughput <= 1199.66 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.65.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 147, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 147 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.65.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 147 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.65.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 147 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.65.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI147PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI147FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI147PM10 = daily average PM10 stack emissions from EQUI 147, in pounds/hour; EQUI147FPM10 = daily average uncaptured PM10 emissions from EQUI 147, in pounds/hour; A = total weight of lead-containing material processed by EQUI 147 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 147 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.65.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI147PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI147FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI147PM2.5 = daily average PM2.5 stack emissions from EQUI 147, in pounds/hour; EQUI147FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 147, in pounds/hour; A = total weight of lead-containing material processed by EQUI 147 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 147 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.65.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI147L = D \times E$ $EQUI147FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI147L = total lead stack emissions from EQUI 147, in pounds/day; EQUI147FL = total uncaptured lead emissions from EQUI 147, in pounds/day; D = total weight of lead-containing material processed by EQUI 147 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 147 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 147 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.65.8	The Permittee shall vent captured emissions from EQUI 147 to control equipment meeting the requirements of TREA 40 and TREA 74 operated in-series, and COMG 12 whenever EQUI 147 operates. The emissions from EQUI 147 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.65.9	The Permittee shall vent captured emissions from EQUI 147 to a stack/vent meeting the requirements of STRU 31 whenever EQUI 147 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.65.10	The Permittee shall vent uncaptured emissions from EQUI 147 to a stack/vent meeting the requirements of STRU 52 whenever EQUI 147 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.65.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.65.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.65.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.65.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.65.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.65.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.65.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.65.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.65.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 149	Die Cast (DC40)

Requirement number	Requirement and citation
5.66.1	The Permittee must limit Process Throughput <= 596.70 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.66.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 149, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 149 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.66.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 149 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.66.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 149 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.66.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI149PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI149FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI149PM10 = daily average PM10 stack emissions from EQUI 149, in pounds/hour; EQUI149FPM10 = daily average uncaptured PM10 emissions from EQUI 149, in pounds/hour; A = total weight of lead-containing material processed by EQUI 149 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 149 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.66.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI149PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI149FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI149PM2.5 = daily average PM2.5 stack emissions from EQUI 149, in pounds/hour; EQUI149FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 149, in pounds/hour; A = total weight of lead-containing material processed by EQUI 149 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 149 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.66.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI149L = D \times E$ $EQUI149FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI149L = total lead stack emissions from EQUI 149, in pounds/day; EQUI149FL = total uncaptured lead emissions from EQUI 149, in pounds/day; D = total weight of lead-containing material processed by EQUI 149 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 149 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 149 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.66.8	The Permittee shall vent captured emissions from EQUI 149 to control equipment meeting the requirements of TREA 41 and TREA 75 operated in-series, and COMG 12 whenever EQUI 149 operates. The emissions from EQUI 149 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.66.9	The Permittee shall vent captured emissions from EQUI 149 to a stack/vent meeting the requirements of STRU 32 whenever EQUI 149 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.66.10	The Permittee shall vent uncaptured emissions from EQUI 149 to a stack/vent meeting the requirements of STRU 51 whenever EQUI 149 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.66.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.66.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.66.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.66.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.66.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.66.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.66.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.66.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.66.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 150	Die Cast (DC48)

Requirement number	Requirement and citation
5.67.1	The Permittee must limit Process Throughput <= 613.11 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.67.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 150, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 150 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.67.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 150 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.67.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 150 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.67.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI150PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI150FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI150PM10 = daily average PM10 stack emissions from EQUI 150, in pounds/hour; EQUI150FPM10 = daily average uncaptured PM10 emissions from EQUI 150, in pounds/hour; A = total weight of lead-containing material processed by EQUI 150 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 150 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.67.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI150PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI150FPM2.5} = (A \times G \times 0.05) / 24$ Where: EQUI150PM2.5 = daily average PM2.5 stack emissions from EQUI 150, in pounds/hour; EQUI150FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 150, in pounds/hour; A = total weight of lead-containing material processed by EQUI 150 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 150 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.67.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI150L = D \times E$ $EQUI150FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI150L = total lead stack emissions from EQUI 150, in pounds/day; EQUI150FL = total uncaptured lead emissions from EQUI 150, in pounds/day; D = total weight of lead-containing material processed by EQUI 150 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 150 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 150 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.67.8	The Permittee shall vent captured emissions from EQUI 150 to control equipment meeting the requirements of TREA 41 and TREA 75 operated in-series, and COMG 12 whenever EQUI 150 operates. The emissions from EQUI 150 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.67.9	The Permittee shall vent captured emissions from EQUI 150 to a stack/vent meeting the requirements of STRU 32 whenever EQUI 150 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.67.10	The Permittee shall vent uncaptured emissions from EQUI 150 to a stack/vent meeting the requirements of STRU 53 whenever EQUI 150 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.67.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.67.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.67.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.67.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.67.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.67.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.67.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.67.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.67.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 152	Die Cast (DC41)

Requirement number	Requirement and citation
5.68.1	The Permittee must limit Process Throughput <= 1305.27 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.68.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 152, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 152 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.68.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 152 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.68.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 152 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.68.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI152PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI152FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI152PM10 = daily average PM10 stack emissions from EQUI 152, in pounds/hour; EQUI152FPM10 = daily average uncaptured PM10 emissions from EQUI 152, in pounds/hour; A = total weight of lead-containing material processed by EQUI 152 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 152 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.68.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI152PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI152FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI152PM2.5 = daily average PM2.5 stack emissions from EQUI 152, in pounds/hour; EQUI152FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 152, in pounds/hour; A = total weight of lead-containing material processed by EQUI 152 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 152 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.68.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI152L = D \times E$ $EQUI152FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI152L = total daily lead stack emissions, in pounds/day; EQUI152FL = total daily uncaptured lead emissions, in pounds/day; D = total weight of lead-containing material processed by EQUI 152 for the previous operating day, in tons/day; E = controlled lead emission factor for EQUI 152 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 152 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.68.8	The Permittee shall vent captured emissions from EQUI 152 to control equipment meeting the requirements of TREA 42 and TREA 76 operated in-series, and COMG 12 whenever EQUI 152 operates. The emissions from EQUI 152 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.68.9	The Permittee shall vent captured emissions from EQUI 152 to a stack/vent meeting the requirements of STRU 33 whenever EQUI 152 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.68.10	The Permittee shall vent uncaptured emissions from EQUI 152 to a stack/vent meeting the requirements of STRU 51 whenever EQUI 152 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.68.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.68.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.68.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.68.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.68.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.68.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.68.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.68.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.68.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 153	Die Cast (DC44)

Requirement number	Requirement and citation
5.69.1	The Permittee must limit Process Throughput <= 1179.85 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.69.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 153, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 153 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.69.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 153 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.69.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 153 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.69.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI153PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI153FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI153PM10 = daily average PM10 stack emissions from EQUI 153, in pounds/hour; EQUI153FPM10 = daily average uncaptured PM10 emissions from EQUI 153, in pounds/hour; A = total weight of lead-containing material processed by EQUI 153 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 153 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.69.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI153PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI153FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI153PM2.5 = daily average PM2.5 stack emissions from EQUI 153, in pounds/hour; EQUI153FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 153, in pounds/hour; A = total weight of lead-containing material processed by EQUI 153 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 153 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.69.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI153L = D \times E$ $EQUI153FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI153L = total lead stack emissions from EQUI 153, in pounds/day; EQUI153FL = total uncaptured lead emissions from EQUI 153, in pounds/day; D = total weight of lead-containing material processed by EQUI 153 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 153 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 153 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.69.8	The Permittee shall vent captured emissions from EQUI 153 to control equipment meeting the requirements of TREA 43 and TREA 77 operated in-series, and COMG 12 whenever EQUI 153 operates. The emissions from EQUI 153 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.69.9	The Permittee shall vent captured emissions from EQUI 153 to a stack/vent meeting the requirements of STRU 34 whenever EQUI 153 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.69.10	The Permittee shall vent uncaptured emissions from EQUI 153 to a stack/vent meeting the requirements of STRU 56 whenever EQUI 153 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.69.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.69.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.69.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.69.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.69.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.69.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.69.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.69.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.69.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 154	Die Cast (DC45)

Requirement number	Requirement and citation
5.70.1	The Permittee must limit Process Throughput <= 1132.90 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.70.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 154, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 154 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.70.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 154 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.70.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 154 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.70.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI154PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI154FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI154PM10 = daily average PM10 stack emissions from EQUI 154, in pounds/hour; EQUI154FPM10 = daily average uncaptured PM10 emissions from EQUI 154, in pounds/hour; A = total weight of lead-containing material processed by EQUI 154 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 154 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.70.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI154PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI154FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI154PM2.5 = daily average PM2.5 stack emissions from EQUI 154, in pounds/hour; EQUI154FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 154, in pounds/hour; A = total weight of lead-containing material processed by EQUI 154 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 154 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.70.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI154L = D \times E$ $EQUI154FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI154L = total lead stack emissions from EQUI 154, in pounds/day; EQUI154FL = total uncaptured lead emissions from EQUI 154, in pounds/day; D = total weight of lead-containing material processed by EQUI 154 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 154 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 154 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.70.8	The Permittee shall vent captured emissions from EQUI 154 to control equipment meeting the requirements of TREA 43 and TREA 77 operated in-series, and COMG 12 whenever EQUI 154 operates. The emissions from EQUI 154 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.70.9	The Permittee shall vent captured emissions from EQUI 154 to a stack/vent meeting the requirements of STRU 34 whenever EQUI 154 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.70.10	The Permittee shall vent uncaptured emissions from EQUI 154 to a stack/vent meeting the requirements of STRU 51 whenever EQUI 154 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.70.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.70.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.70.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.70.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.70.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.70.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.70.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.70.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.70.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 155	Die Cast (DC52)

Requirement number	Requirement and citation
5.71.1	The Permittee must limit Process Throughput <= 462.53 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.71.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 155, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 155 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.71.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 155 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.71.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 155 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.71.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI155PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI155FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI155PM10 = daily average PM10 stack emissions from EQUI 155, in pounds/hour; EQUI155FPM10 = daily average uncaptured PM10 emissions from EQUI 155, in pounds/hour; A = total weight of lead-containing material processed by EQUI 155 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 155 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.71.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI155PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI155FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI155PM2.5 = daily average PM2.5 stack emissions from EQUI 155, in pounds/hour; EQUI155FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 155, in pounds/hour; A = total weight of lead-containing material processed by EQUI 155 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 155 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.71.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI155L = D \times E$ $EQUI155FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI155L = total lead stack emissions from EQUI 155, in pounds/day; EQUI155FL = total uncaptured lead emissions from EQUI 155, in pounds/day; D = total weight of lead-containing material processed by EQUI 155 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 155 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 155 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.71.8	The Permittee shall vent captured emissions from EQUI 155 to control equipment meeting the requirements of TREA 36 and TREA 71 operated in-series, and COMG 12 whenever EQUI 155 operates. The emissions from EQUI 155 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.71.9	The Permittee shall vent captured emissions from EQUI 155 to a stack/vent meeting the requirements of STRU 26 whenever EQUI 155 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.71.10	The Permittee shall vent uncaptured emissions from EQUI 155 to a stack/vent meeting the requirements of STRU 46 whenever EQUI 155 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.71.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.71.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.71.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.71.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.71.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.71.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.71.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.71.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.71.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 156	Die Cast (DC50)

Requirement number	Requirement and citation
5.72.1	The Permittee must limit Process Throughput ≤ 855.22 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.72.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 156, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 156 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.72.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 156 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.72.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 156 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.72.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI156PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI156FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI156PM10 = daily average PM10 stack emissions from EQUI 156, in pounds/hour; EQUI156FPM10 = daily average uncaptured PM10 emissions from EQUI 156, in pounds/hour; A = total weight of lead-containing material processed by EQUI 156 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 156 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.72.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI156PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI156FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI156PM2.5 = daily average PM2.5 stack emissions from EQUI 156, in pounds/hour; EQUI156FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 156, in pounds/hour; A = total weight of lead-containing material processed by EQUI 156 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 156 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.72.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI156L = D \times E$ $EQUI156FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI156L = total lead stack emissions from EQUI 156, in pounds/day; EQUI156FL = total uncaptured lead emissions from EQUI 156, in pounds/day; D = total weight of lead-containing material processed by EQUI 156 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 156 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 156 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.72.8	The Permittee shall vent captured emissions from EQUI 156 to control equipment meeting the requirements of TREA 42 and TREA 76 operated in-series, and COMG 12 whenever EQUI 156 operates. The emissions from EQUI 156 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.72.9	The Permittee shall vent captured emissions from EQUI 156 to a stack/vent meeting the requirements of STRU 33 whenever EQUI 156 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.72.10	The Permittee shall vent uncaptured emissions from EQUI 156 to a stack/vent meeting the requirements of STRU 51 whenever EQUI 156 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.72.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.72.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.72.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.72.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.72.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.72.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.72.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.72.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.72.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 157	Die Cast (DC51)

Requirement number	Requirement and citation
5.73.1	The Permittee must limit Process Throughput <= 1305.27 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.73.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 157, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 157 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.73.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 157 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.73.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 157 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.73.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI157PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI157FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI157PM10 = daily average PM10 stack emissions from EQUI 157, in pounds/hour; EQUI157FPM10 = daily average uncaptured PM10 emissions from EQUI 157, in pounds/hour; A = total weight of lead-containing material processed by EQUI 157 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 157 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.73.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI157PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI157FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI157PM2.5 = daily average PM2.5 stack emissions from EQUI 157, in pounds/hour; EQUI157FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 157, in pounds/hour; A = total weight of lead-containing material processed by EQUI 157 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 157 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.73.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI157L = D \times E$ $EQUI157FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI157L = total daily lead stack emissions, in pounds/day; EQUI157FL = total daily uncaptured lead emissions, in pounds/day; D = total weight of lead-containing material processed by EQUI 157 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 157 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 157 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.73.8	The Permittee shall vent captured emissions from EQUI 157 to control equipment meeting the requirements of TREA 26 and TREA 62 operated in-series, and COMG 12 whenever EQUI 157 operates. The emissions from EQUI 157 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.73.9	The Permittee shall vent captured emissions from EQUI 157 to a stack/vent meeting the requirements of STRU 16 whenever EQUI 157 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.73.10	The Permittee shall vent uncaptured emissions from EQUI 157 to a stack/vent meeting the requirements of STRU 56 whenever EQUI 157 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.73.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.73.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.73.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.73.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.73.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.73.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.73.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.73.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.73.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 158	Die Cast (DC53)

Requirement number	Requirement and citation
5.74.1	The Permittee must limit Process Throughput <= 1233.40 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.74.2	Process Throughput: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 158, this shall be based on written usage logs; and 2) daily average of the hourly process throughput for EQUI 158 for the previous operating day. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.74.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 158 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.74.4	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 158 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.74.5	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equations: $\text{EQUI158PM10} = [A \times B \times 0.95 \times (1 - \text{CE1})] / 24$ $\text{EQUI158FPM10} = (A \times B \times 0.05) / 24$ Where: EQUI158PM10 = daily average PM10 stack emissions from EQUI 158, in pounds/hour; EQUI158FPM10 = daily average uncaptured PM10 emissions from EQUI 158, in pounds/hour; A = total weight of lead-containing material processed by EQUI 158 for the previous operating day, in pounds/day; B = uncontrolled PM10 emission factor for EQUI 158 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.74.6	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equations: $\text{EQUI158PM2.5} = [A \times C \times 0.95 \times (1 - \text{CE2})] / 24$ $\text{EQUI158FPM2.5} = (A \times C \times 0.05) / 24$ Where: EQUI158PM2.5 = daily average PM2.5 stack emissions from EQUI 158, in pounds/hour; EQUI158FPM2.5 = daily average uncaptured PM2.5 emissions from EQUI 158, in pounds/hour; A = total weight of lead-containing material processed by EQUI 158 for the previous operating day, in pounds/day; C = uncontrolled PM2.5 emission factor for EQUI 158 listed in Appendix D, as a fraction; and

Requirement number	Requirement and citation
	CE2 = minimum overall PM2.5 control efficiency required by COMG 12, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.74.7	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equations: $EQUI158L = D \times E$ $EQUI158FL = D \times H \times 0.05$</p> <p>Where:</p> <p>EQUI158L = total lead stack emissions from EQUI 158, in pounds/day; EQUI158FL = total uncaptured lead emissions from EQUI 158, in pounds/day; D = total weight of lead-containing material processed by EQUI 158 for the previous operating day, in pounds/day; E = controlled lead emission factor for EQUI 158 listed in Appendix D, as a fraction; and H = uncontrolled lead emission factor for EQUI 158 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.74.8	The Permittee shall vent captured emissions from EQUI 158 to control equipment meeting the requirements of TREA 39 and TREA 73 operated in-series, and COMG 12 whenever EQUI 158 operates. The emissions from EQUI 158 shall be captured with a closed connection to control equipment. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.74.9	The Permittee shall vent captured emissions from EQUI 158 to a stack/vent meeting the requirements of STRU 30 whenever EQUI 158 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.74.10	The Permittee shall vent uncaptured emissions from EQUI 158 to a stack/vent meeting the requirements of STRU 52 whenever EQUI 158 operates. The uncaptured emissions shall be limited to emissions escaping the die cast casing. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.74.11	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.74.12	PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.74.13	PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]

Requirement number	Requirement and citation
5.74.14	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.74.15	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.74.16	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.74.17	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.74.18	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.74.19	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
EQUI 160	Billet Saw

Requirement number	Requirement and citation
5.75.1	The Permittee must limit Process Throughput \leq 1000.0 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.75.2	The Permittee shall limit Process Throughput \leq 24.0 pounds per hour 365-day rolling sum. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.75.3	Process Throughput and Hours of Operation: Daily Recordkeeping. By 4:30 pm on each day of operation, the Permittee shall measure or calculate, record, and maintain a record of the following for the previous operating day: 1) the total weight of each lead-containing material processed by EQUI 160, this shall be based on written usage logs; 2) daily average of the hourly process throughput for EQUI 160 for the previous operating day, which is equal to the pounds per day of all lead-containing material processed by EQUI 160 divided by 18 hours of daily allowable operation; 3) average of the hourly process throughput for EQUI 160 for the previous 365-day period by calculating the average of the daily hourly process throughput for the previous 365 days; and 4) the time of the day when EQUI 160 was operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.75.4	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 160 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.75.5	Lead: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of each lead-containing material processed by EQUI 160 in the previous operating day using the daily usage records; and 2) The total lead emissions for the previous operating day using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.75.6	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equation: $\text{EQUI160PM10} = (A \times B) / 18$ Where: EQUI160PM10 = daily average PM10 stack emissions from EQUI 160, in pounds/hour; A = total weight of lead-containing material or pure tin processed by EQUI 160 for the previous operating day, in pounds/day; and B = uncontrolled PM10 emission factor for EQUI 160 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]
5.75.7	PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equation: $\text{EQUI160PM2.5} = (A \times C) / 18$ Where:

Requirement number	Requirement and citation
	<p>EQUI160PM2.5 = daily average PM2.5 stack emissions from EQUI 160, in pounds/hour; A = total weight of lead-containing material or pure tin processed by EQUI 160 for the previous operating day, in pounds/day; and C = uncontrolled PM2.5 emission factor for EQUI 160 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.75.8	<p>Lead: Daily Calculation. The Permittee shall calculate lead emissions using the following equation: EQUI160L = D x E</p> <p>Where:</p> <p>EQUI160L = total lead stack emissions from EQUI 160, in pounds/day; D = total weight of lead-containing material processed by EQUI 160 for the previous operating day, in pounds/day; and E = uncontrolled lead emission factor for EQUI 160 listed in Appendix D, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.75.9	<p>The Permittee shall vent emissions from EQUI 160 to a stack/vent meeting the requirements of STRU 35 whenever EQUI 160 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.75.10	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.75.11	<p>PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.75.12	<p>PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.75.13	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. . Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate</p>

Requirement number	Requirement and citation
	<p>in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.75.14	<p>PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.75.15	<p>PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.75.16	<p>Lead: Protocol for Re-Setting the Emission Factor Used For Calculating Lead Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 12 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound lead per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound lead per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.75.17	<p>Lead: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating Lead Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.75.18	<p>Lead: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.75.19	<p>The Permittee must limit the daily operation of EQUI 160 to the period between 5 am and 11 pm. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
EQUI 166	Coating Room Bulk Solvent Tank
5.76.1	<p>The Permittee shall operate EQUI 166 in a permanent total enclosure meeting the requirements of COMG 5. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.76.2	<p>The Permittee shall operate EQUI 166 meeting the requirements of COMG 1. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
EQUI 172	Battery Terminal Post Coater 29

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 193 of 672

Requirement number	Requirement and citation
5.77.1	The Permittee shall vent emissions from EQUI 172 to a stack/vent meeting the requirements of STRU 53 whenever EQUI 172 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.77.2	At the time of permit issuance, EQUI 172 is a water-based dip coater as described in Appendix B of this permit and shall comply with requirements under COMG 1. EQUI 172 may only be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.77.3	The Permittee shall apply water-based coating from EQUI 172 using dip or drip application methods only unless it is modified as authorized elsewhere in this permit. Spray application of coating while venting emissions to STRU 53 is prohibited. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 173	Coating Room Soaker Tank
5.78.1	The Permittee shall operate EQUI 173 in a permanent total enclosure meeting the requirements of COMG 5. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.78.2	The Permittee shall operate EQUI 173 meeting the requirements of COMG 1. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
EQUI 174	Solvent Distillation Unit
5.79.1	The Permittee shall vent emissions from EQUI 174 to a stack/vent meeting the requirements of STRU 59 whenever EQUI 174 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.79.2	The Permittee shall operate EQUI 174 meeting the requirements of COMG 1. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.79.3	VOC Solvent Distiller Operation: The Permittee shall minimize fugitive VOC emissions and spills during filling, operation, emptying, and clean out of the VOC solvent distiller according to standard operating procedures, including the following: 1) Install a fill sensor or other fail-safe to prevent spilling of recycled VOC solvent during distillation; 2) Ensure that the operator of the distillation equipment remains in close proximity to the equipment while distillation is taking place; 3) Transfer recycled VOC solvent from distiller into containers that include secondary containment; and 4) Empty all distiller bottoms and other residue into a closed container and dispose as hazardous waste. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. ch. 7045, Minn. Stat. 116.385, subd. 3]
5.79.4	The Permittee may only distill dirty solvent that contains 1,2-(trans-) Dichloroethylene from the parts soaker tank (EQUI 173). [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.79.5	1,2-(trans-) Dichloroethylene Content of Distilled Material: The Permittee shall determine the specific content of 1,2-(trans-) Dichloroethylene in distilled material, in weight percent, following the analysis procedure and frequency requirements in Appendix B. Alternatively, the Permittee may analyze the distilled material for VOC and assume all of the VOC in distilled material is 1,2-(trans-) Dichloroethylene. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]

Requirement number	Requirement and citation
EQUI 176	VOC CEMS (STRU 73)
5.80.1	1,2-(trans-) Dichloroethylene: Emissions Monitoring: The Permittee shall install, operate, and maintain a Continuous Emissions Monitoring System (CEMS) to measure Total Hydrocarbon Concentration (THC) expressed as ppmv-wet 1,2-(trans-) Dichloroethylene emissions discharged to the atmosphere from STRU 73, and shall record the output of the CEMS. [Minn. R. 7017.1006, Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D); Minn. Stat. 116.07, subd. 9(2), and Minn. Stat. 116.385, subd. 3]
5.80.2	Certification Test Plan due 30 days before Certification Test. Certification Test Pretest Meeting due seven days before Certification Test. Certification Test Report due 45 days after Certification Test. The Test Plan and Test Report must be submitted in a format specified by the commissioner. [Minn. R. 7017.1060, subp. 1-3, Minn. R. 7017.1080, Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. Stat. 116.385, subd. 3, Minn. Stat. 116.07, subd. 9(2)]
5.80.3	Continuous Operation: CEMS must be operated and data recorded during all periods of emission unit operation including periods of emission unit start-up, shutdown, or malfunction except for periods of acceptable monitor downtime. This requirement applies whether a numerical emission limit applies during these periods. A CEMS must not be bypassed except in emergencies where failure to bypass would endanger human health, safety, or plant equipment. [Minn. R. 7017.1090, Minn. Stat. 116.07, subd. 9(2), Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. Stat. 116.385, subd. 3]
5.80.4	Monitoring Data: All data points collected by a CEMS shall be used to calculate individual hourly emission averages unless another applicable requirement requires more frequent averaging. Each hourly average starts at the beginning of the hour and ends at the beginning of the following hour. In order for an hour of data to be considered valid, it must contain the following minimum number of data points: A. four data points, equally spaced, if the emission unit operated during the entire hour; B. two data points, at least 15 minutes apart, during periods of monitor calibration or routine maintenance; C. one data point if the emission unit operated for 15 minutes or less during the hour. Monitoring data shall be recorded in the same units of measurement and averaging period as the facility's emission standard. [Minn. R. 7017.1160, Minn. Stat. 116.07, subd. 9(2), Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. Stat. 116.385, subd. 3]
5.80.5	1,2-(trans-) Dichloroethylene Response Factor: The monitored Total Hydrocarbon Concentration (THC) shall be adjusted with a response factor to derive 1,2-(trans-) Dichloroethylene emissions. The monitor will be calibrated and read emissions in ppm-wet, as propane. A 1,2-(trans-) Dichloroethylene calibration gas will be introduced to the instrument to determine the multiplier used to derive a correlated emission result using the equation: Calibration Gas Value/Monitor response as propane. The response factor shall be determined at the following events: 1. CEMS Certification/Recertification; 2. Relative Accuracy Test Audit (RATA); or 3. Change to a calibration gas with a different concentration. [Minn. R. 7017.1060, Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. Stat. 116.385, subd. 3; Minn. Stat. 116.07, subd. 9(2)]

Commented [A41]: See the Company's Comment Letter for reasons the VOC CEMS is unnecessary.

Requirement number	Requirement and citation
5.80.6	Certification Test Plan: The Permittee shall submit an approvable Certification Test Plan to the Commissioner that contains the following: 1) Name and address of emission facility; 2) Name, title, and telephone number of contact person at facility; 3) Permit number or name and data of applicable compliance document requiring test; 4) Statement of whether the test is an initial certification or a recertification; 5) Drawing of the monitoring system which indicates the location of the reference method ports and monitoring system probe location in relation to the nearest flow disturbances both upstream and downstream of the monitoring system as well as any monitor bypass routes; 6) Make, model, and serial number of the monitor and data recording system; 7) Name and telephone number of testing company; 8) Planned certification test date; 9) List of the performance specifications from Code of Federal Regulations, title 40, part 60, appendix B, which will be followed during the test; 10) List of the reference methods from Code of Federal Regulations, title 40, part 60, appendix A, which will be followed during the test; 11) Units of measurement under which the monitor will be certified, for example, lb/hr, ppm, lb/MMBtu; 12) Monitoring system's span, range, and calibration levels; and 13) Planned emission unit(s) operating range, for example, heat input, steam output, during the certification test. [Minn. R. 7017.1060, Minn. Stat. 116.07, subd. 9(2), Minn. R. 7017.1060, Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. Stat. 116.385, subd. 3]
5.80.7	QA Plan: Develop and implement a written quality assurance plan that covers each CEMS. The plan must be on site and available for inspection within 30 days after monitor certification. The plan must include the manufacturer's spare parts list for each CEMS and require that those parts be kept at the facility unless the Commissioner gives written approval to exclude specific spare parts from the list. [Minn. R. 7017.1170, subp. 2, Minn. Stat. 116.07, subd. 9(2), Minn. R. 7017.1060, Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. Stat. 116.385, subd. 3]
5.80.8	CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) gas concentrations at least once daily according to the procedures listed in Minn. R. 7017.1170, subp. 3(A) and (B), 40 CFR Section 60.13(d)(1) or 40 CFR pt. 75, Appendix B as applicable for each pollutant concentration, each diluent monitor, and for each monitor range. If no span value is specified in the applicable requirement or in a compliance document, the Permittee shall use a span value equivalent to 1.5 times the emission limit. [Minn. R. 7017.1170, subp. 3, Minn. Stat. 116.07, subd. 9(2), Minn. R. 7017.1060, Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. Stat. 116.385, subd. 3]
5.80.9	Relative Accuracy Test Audit (RATA) Notification: due 30 days before CEMS Relative Accuracy Test Audit (RATA). [Minn. R. 7017.1180, subp. 2, Minn. Stat. 116.07, subd. 9(2), Minn. R. 7017.1060, Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. Stat. 116.385, subd. 3]
5.80.10	CEMS Certification/Recertification Test: due 90 days after the first excess emissions report required for the CEMS or any change which invalidates the monitor's certification status as outlined in Minn. R. 7017.1050, subp. 2. [Minn. R. 7017.1050, subp. 1, Minn. Stat. 116.07, subd. 9(2), Minn. R. 7017.1060, Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. Stat. 116.385, subd. 3]
5.80.11	Recordkeeping: The owner or operator must retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source. [Minn. R. 7017.1130, Minn. Stat. 116.07, subd. 9(2), [Minn. R. 7017.1060, Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subp. 4(C) and (D), Minn. Stat. 116.385, subd. 3]
EQUI 219	Battery Terminal Post Coater 33

Requirement number	Requirement and citation
5.81.1	At the time of permit issuance, EQUI 219 is a UV spray coater as described in Appendix B of this permit and shall comply with the requirements under COMG 1, COMG 2, and COMG 5. EQUI 219 may be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & (B) , Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.81.2	The Permittee shall vent emissions from EQUI 219 to control equipment meeting the requirements of TREA 58 whenever EQUI 219 operates. [Minn. R. 7007.0800, subps. 2(A) & (B) , Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
EQUI 220	Battery Terminal Post Coater 34
5.82.1	At the time of permit issuance, EQUI 220 is a UV spray coater as described in Appendix B of this permit and shall comply with the requirements under COMG 1, COMG 2, and COMG 5. EQUI 220 may be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.82.2	The Permittee shall vent emissions from EQUI 220 to control equipment meeting the requirements of TREA 59 whenever EQUI 220 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
EQUI 221	Tin Melt Pot
5.83.1	The Permittee must limit Process Throughput <= 2500.0 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.83.2	Process Throughput: Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain a record of the total weight of tin material processed by EQUI 221. This shall be based on written usage logs. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.83.3	Particulate Matter: Daily Recordkeeping. By 4:30pm each operating day, the Permittee shall calculate and record the following: 1) The total weight of pure tin processed by EQUI 221 for the previous operating day using daily usage records; 2) The total PM10 emissions for the previous operating day using the formulas specified in this permit; and 3) The total PM2.5 emissions for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.83.4	PM < 10 micron: Daily Calculation. The Permittee shall calculate PM10 emissions using the following equation: $EQUI221PM10 = [A \times B \times (1-CE1)] / 24$ Where: EQUI221PM10 = daily average PM10 emissions from EQUI 221, in pounds/hour; A = total weight of pure tin processed by EQUI 221 for the previous operating day, in pounds/day; and B = uncontrolled PM10 emission factor for EQUI 221 listed in Appendix D, as a fraction; and CE1 = minimum overall PM10 control efficiency required by COMG 11, as a fraction. [Minn. R. 7007.0800, subps. 4-5]

Requirement number	Requirement and citation
5.83.5	<p>PM < 2.5 micron: Daily Calculation. The Permittee shall calculate PM2.5 emissions using the following equation: $\text{EQUI221PM2.5} = [A \times C \times (1 - \text{CE2})] / 24$</p> <p>Where:</p> <p>EQUI221PM2.5 = daily average PM2.5 emissions from EQUI 221, in pounds/hour; A = total weight of pure tin processed by EQUI 221 for the previous operating day, in pounds/day; and C = uncontrolled PM2.5 emission factor for EQUI 221 listed in Appendix D, as a fraction; and CE2 = minimum overall PM2.5 control efficiency required by COMG 11, as a fraction. [Minn. R. 7007.0800, subps. 4-5]</p>
5.83.6	<p>The Permittee shall vent melt emissions from EQUI 221 to control equipment meeting the requirements of TREA 1 and TREA 60 operated in-series, and COMG 11 whenever EQUI 221 operates. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.83.7	<p>The Permittee shall vent melt emissions from EQUI 221 to a stack/vent meeting the requirements of STRU 1 whenever EQUI 221 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.83.8	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.83.9	<p>PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.83.10	<p>PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.83.11	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-</p>

Requirement number	Requirement and citation
	approved emission factor performance test. The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.83.12	PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.83.13	PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
EQUI 223	Coining Booth 1
5.84.1	The Permittee must limit the daily operation of EQUI 223 to the period between 5 am and 11 pm. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.84.2	Daily Recordkeeping. On each day of operation, the Permittee shall record the time of the day when EQUI 223 was in operation. This shall be based on written usage logs. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 224	Coining Booth 2
5.85.1	The Permittee must limit the daily operation of EQUI 224 to the period between 5 am and 11 pm. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.85.2	Daily Recordkeeping. On each day of operation, the Permittee shall record the time of the day when EQUI 224 was in operation. This shall be based on written usage logs. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 225	Coining Booth 3
5.86.1	The Permittee must limit the daily operation of EQUI 225 to the period between 5 am and 11 pm. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.86.2	Daily Recordkeeping. On each day of operation, the Permittee shall record the time of the day when EQUI 225 was in operation. This shall be based on written usage logs. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 226	Coining Booth 4
5.87.1	The Permittee must limit the daily operation of EQUI 226 to the period between 5 am and 11 pm. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.87.2	Daily Recordkeeping. On each day of operation, the Permittee shall record the time of the day when EQUI 226 was in operation. This shall be based on written usage logs. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 227	Coining Booth 5
5.88.1	The Permittee must limit the daily operation of EQUI 227 to the period between 5 am and 11 pm. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.88.2	Daily Recordkeeping. On each day of operation, the Permittee shall record the time of the day when EQUI 227 was in operation. This shall be based on written usage logs. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 228	Coining Booth 6

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 199 of 672

Requirement number	Requirement and citation
5.89.1	The Permittee must limit the daily operation of EQUI 228 to the period between 5 am and 11 pm. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.89.2	Daily Recordkeeping. On each day of operation, the Permittee shall record the time of the day when EQUI 228 was in operation. This shall be based on written usage logs. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 229	Coining Booth 7
5.90.1	The Permittee must limit the daily operation of EQUI 229 to the period between 5 am and 11 pm. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.90.2	Daily Recordkeeping. On each day of operation, the Permittee shall record the time of the day when EQUI 229 was in operation. This shall be based on written usage logs. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 230	Coining Booth 8
5.91.1	The Permittee must limit the daily operation of EQUI 230 to the period between 5 am and 11 pm. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.91.2	Daily Recordkeeping. On each day of operation, the Permittee shall record the time of the day when EQUI 230 was in operation. This shall be based on written usage logs. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 231	Coining Booth 9
5.92.1	The Permittee must limit the daily operation of EQUI 231 to the period between 5 am and 11 pm. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.92.2	Daily Recordkeeping. On each day of operation, the Permittee shall record the time of the day when EQUI 231 was in operation. This shall be based on written usage logs. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 232	Coining Booth 10
5.93.1	The Permittee must limit the daily operation of EQUI 232 to the period between 5 am and 11 pm. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
5.93.2	Daily Recordkeeping. On each day of operation, the Permittee shall record the time of the day when EQUI 232 was in operation. This shall be based on written usage logs. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 233	Battery Terminal Post Coater 19
5.94.1	The Permittee shall vent emissions from EQUI 233 to a stack/vent meeting the requirements of STRU 50 whenever EQUI 233 operates. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.94.2	At the time of permit issuance, EQUI 233 is a water-based dip coater as described in Appendix B of this permit and shall comply with requirements under COMG 1. EQUI 233 may only be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.94.3	The Permittee shall apply water-based coating from EQUI 172 using dip or drip application methods only unless it is modified as authorized elsewhere in this permit. Spray application of coating while venting emissions to STRU 50 is prohibited. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
EQUI 240	Prototype Coater

Requirement number	Requirement and citation
5.95.1	The Permittee shall vent emissions from EQUI 240 to a stack/vent meeting the requirements of STRU 72 whenever EQUI 240 operates. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.95.2	At the time of permit issuance, EQUI 240 is a UV spray coater as described in Appendix B of this permit and shall comply with the requirements under COMG 1. EQUI 240 shall comply with the requirements under COMG 2 except for having to comply with the following: 1) operate with control equipment meeting the requirements in COMG 14; and 2) operate in a coating room meeting the requirements of COMG 5. EQUI 240 may be modified as authorized elsewhere in the permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), Title I Condition: Avoid major source under 40 CFR 52.21(b)(1)(i) and Minn. R. 7007.3000, To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.95.3	The Permittee is prohibited from using any coating that contains any hazardous air pollutant (HAP), including the target HAPs as defined under 40 CFR Section 63.11180. [Minn. R. 7007.0800, subps. 2(A)]
5.95.4	Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain a record of the total quantity of each coating and other solids-containing material, including the solids content of each coating (as a mass fraction), used by EQUI 240 and the time-of-day EQUI 240 was in operation. This shall be based on written usage logs. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.95.5	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate, record, and maintain a record of the following for the previous operating day using the daily usage records: 1) Total weight of UV coating used by EQUI 240, in pounds/day; and 2) Daily average hourly emissions of PM10 and PM2.5 from EQUI 240 as determined elsewhere in this permit, in pounds/hour. This record shall also include solids contents of each material as determined by the Material Content requirement of this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.95.6	PM < 10 micron: Daily Calculations. The Permittee shall calculate PM10 emissions from EQUI 240 using the following equations: $EQUI240PM10 = I \times J$ where: $EQUI240PM10$ = daily average PM10 emissions from EQUI 240, in pounds/hour; I = total weight of coating used in EQUI 240 based on daily usage logs, in pounds/day; and J = uncontrolled PM10 emission factor, in pounds PM10 per pound of coating, listed in Appendix B, as a fraction. Other uncontrolled emission factors allowed by this permit shall be based on the most recent MPCA-approved stack test results performed according to approved replicable methodology (ARM) requirements. [Minn. R. 7007.0800, subps. 4-5]
5.95.7	PM < 2.5 micron: Daily Calculations. The Permittee shall calculate PM2.5 emissions from EQUI 240 using the following equations: $EQUI240PM2.5 = I \times K$ where: $EQUI240PM2.5$ = daily average PM2.5 emissions from EQUI 240, in pounds/hour;

Requirement number	Requirement and citation
	<p>I = total weight of coating used in EQUI 240 based on daily usage logs, in pounds/day; and K = uncontrolled PM2.5 emission factor, in pounds PM2.5 per pound of coating, listed in Appendix B, as a fraction. Other uncontrolled emission factors allowed by this permit shall be based on the most recent MPCA-approved stack test results performed according to approved replicable methodology (ARM) requirements. [Minn. R. 7007.0800, subps. 4-5]</p>
5.95.8	<p>Maximum Contents of Materials and Process Rate: The Permittee assumed certain worst-case contents of materials and process rates when determining the short-term potential to emit of EQUI 240. These assumptions are listed in Appendix B of this permit. Increasing the process rate or changing to a material that has a higher content of any of the given pollutants, or an addition of a pollutant not listed in Appendix B, is considered a change in method of operation that must be evaluated under Minn. R. 7007.1200, subp. 3 to determine if a permit amendment or notification is required under Minn. R. 7007.1150. [Minn. R. 7005.0100, subps. 35a]</p>
5.95.9	<p>PM < 10 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM10 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM10 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM10 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.95.10	<p>PM < 10 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM10 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]</p>
5.95.11	<p>PM < 10 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]</p>
5.95.12	<p>PM < 2.5 micron: Protocol for Re-Setting the Emission Factor Used For Calculating PM2.5 Emissions: The Permittee shall conduct performance testing under conditions that produce the maximum emission rate, using US EPA reference method 201A and 202 to measure the emission factor as required elsewhere in this permit. Another test method as approved by MPCA in the performance test plan may be used. The Permittee shall report the test result in pound PM2.5 per pound of lead-containing material in the performance test report required by Minn. R. 7017.2035, subp. 1.</p> <p>The emission factor used for calculating emissions shall be re-set to the 3-hour average emission rate in pound PM2.5 per pound of lead-containing material, measured during the most recent MPCA-approved emission factor performance test.</p> <p>The new emission factor used for calculating emissions determined using this Protocol shall be effective upon receipt of the Notice of Compliance (NOC) letter that approves the test results and shall be incorporated into the permit during the next permit amendment. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>

Requirement number	Requirement and citation
5.95.13	PM < 2.5 micron: The Permittee must apply for and obtain a major permit amendment if the Permittee wishes to deviate from the Protocol for Re-setting the Emission Factor Used for Calculating PM2.5 Emissions established by this permit. [Minn. R. 7007.1500, subp. 1]
5.95.14	PM < 2.5 micron: Notwithstanding the Protocol detailed above, the MPCA reserves the right to set operational limits and requirements as allowed under Minn. R. 7017.2025. If the MPCA sets limits, the new limits shall be implemented upon receipt of the NOC letter that notifies the Permittee of preliminary approval. The limits set according to Minn. R. 7017.2025 are final upon issuance of a permit amendment incorporating the change. [Minn. R. 7017.2025]
5.95.15	The Permittee must limit the daily operation of EQUI 240 to the period between 5 am and 11 pm. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 1	Smog Hog #15 Stack
5.96.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.1012 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.96.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.1012 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.96.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 0.2732 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.96.4	Emission limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.00297 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.96.5	Emission Limit for the First 365 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 1.0835 pounds per year 365-day sum. The cumulative amount must be calculated each operating day for the first 365 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. Stat. 116.07, subd. 4a(a)]
5.96.6	Emission limit Effective on the 366 th Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 1.0835 pounds per year 365-day rolling sum. The 365-day rolling sum must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. Stat. 116.07, subd. 4a(a)]
5.96.7	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 1 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 1 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.96.8	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 1 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 1, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit;

Requirement number	Requirement and citation
	3) On the 93rd day following permit issuance and daily thereafter, the 92-day rolling average lead emissions from STRU 1, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 1, in pound per year for the previous operating days since the date of permit issuance, using formulas specified in this permit; and 5) On the 366th day following permit issuance and daily thereafter, the 365-day rolling sum lead emissions from STRU 1, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.96.9	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 1 using the following equation: $\text{STRU1PM10} = \text{EQUI101PM10} + \text{EQUI102PM10} + \text{EQUI103PM10} + \text{EQUI104PM10} + \text{EQUI221PM10}$ where: STRU1PM10 = total daily average PM10 emissions emitted through STRU 1 from EQUI 101, EQUI 102, EQUI 103, EQUI 104, and EQUI 221, in pounds/hour; EQUI101PM10 = total daily average PM10 stack emissions from EQUI 101, in pounds/hour; EQUI102PM10 = total daily average PM10 stack emissions from EQUI 102, in pounds/hour; EQUI103PM10 = total daily average PM10 stack emissions from EQUI 103, in pounds/hour; EQUI104PM10 = total daily average PM10 stack emissions from EQUI 104, in pounds/hour; and EQUI221PM10 = total daily average PM10 stack emissions from EQUI 221, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.96.10	PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 1 using the following equation: $\text{STRU1PM2.5} = \text{EQUI101PM2.5} + \text{EQUI102PM2.5} + \text{EQUI103PM2.5} + \text{EQUI104PM2.5} + \text{EQUI221PM2.5}$ where: STRU1PM2.5 = total daily average PM2.5 emissions emitted through STRU 1 from EQUI 101, EQUI 102, EQUI 103, EQUI 104, and EQUI 221, in pounds/hour; EQUI101PM2.5 = total daily average PM2.5 stack emissions from EQUI 101, in pounds/hour; EQUI102PM2.5 = total daily average PM2.5 stack emissions from EQUI 102, in pounds/hour; EQUI103PM2.5 = total daily average PM2.5 stack emissions from EQUI 103, in pounds/hour; EQUI104PM2.5 = total daily average PM2.5 stack emissions from EQUI 104, in pounds/hour; and EQUI221PM2.5 = total daily average PM2.5 stack emissions from EQUI 221, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.96.11	Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the daily cumulative sum lead emissions from STRU 1 using the following equations: $\text{STRU1L} = \text{EQUI101L} + \text{EQUI102L} + \text{EQUI103L} + \text{EQUI 104L}$ $\text{STRU1L3CS} = \text{STRU1L1} + \text{STRU1L2} + \text{STRU1L3} + \dots + \text{STRU1L90} + \text{STRU1L91} + \text{STRU1L92}$ where: STRU1L# = total daily lead emissions emitted through STRU 1 from EQUI 101, EQUI 102, EQUI 103, and EQUI 104, in pounds/day;

Requirement number	Requirement and citation
	STRU1L3CS = cumulative sum lead emissions emitted through STRU 1 from EQUI 101, EQUI 102, EQUI 103, and EQUI 104 for the first 92-day period beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI101L = total lead stack emissions from EQUI 101, in pounds/day; EQUI102L = total lead stack emissions from EQUI 102, in pounds/day; EQUI103L = total lead stack emissions from EQUI 103, in pounds/day; and EQUI104L = total lead stack emissions from EQUI 104, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.96.12	Lead: Daily Calculations on the 93 rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 1 using the following equations: $\text{STRU1L} = \text{EQUI101L} + \text{EQUI102L} + \text{EQUI103L} + \text{EQUI104L}$ $\text{STRU1L3A} = [(\text{STRU1L2} + \text{STRU1L3} + \text{STRU1L4} + \dots + \text{STRU1L91} + \text{STRU1L92} + \text{STRU1L93}) - \text{STRU1L1}] / 92 \text{ days}$ where: STRU1L# = total daily lead emissions emitted through STRU 1 from EQUI 101, EQUI 102, EQUI 103, and EQUI 104, in pounds/day; STRU1L3A = 92-day rolling average lead emissions emitted through STRU 1 from EQUI 101, EQUI 102, EQUI 103, and EQUI 104 for the previous 92-day period, in pounds/day; EQUI101L = total lead stack emissions from EQUI 101, in pounds/day; EQUI102L = total lead stack emissions from EQUI 102, in pounds/day; EQUI103L = total lead stack emissions from EQUI 103, in pounds/day; and EQUI104L = total lead stack emissions from EQUI 104, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.96.13	Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the daily cumulative sum lead emissions from STRU 1 using the following equations: $\text{STRU1L} = \text{EQUI101L} + \text{EQUI102L} + \text{EQUI103L} + \text{EQUI104L}$ $\text{STRU1L365CS} = \text{STRU1L1} + \text{STRU1L2} + \text{STRU1L3} + \dots + \text{STRU1L363} + \text{STRU1L364} + \text{STRU1L365}$ where: STRU1L# = daily lead emissions emitted through STRU 1 from EQUI 101, EQUI 102, EQUI 103, and EQUI 104, in pounds/day; STRU1L365CS = cumulative sum lead emissions emitted through STRU 1 from EQUI 101, EQUI 102, EQUI 103, and EQUI 104 for the first 365-day period beginning on permit issuance date, in pounds/year; EQUI101L = total lead stack emissions from EQUI 101, in pounds/day; EQUI102L = total lead stack emissions from EQUI 102, in pounds/day; EQUI103L = total lead stack emissions from EQUI 103, in pounds/day; and EQUI104L = total lead stack emissions from EQUI 104, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.96.14	Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 1 using the following equations:

Requirement number	Requirement and citation
	<p>STRU1L = EQUI101L + EQUI102L + EQUI103L + EQUI104L STRU1L365RS = (STRU1L2 + STRU1L3 + STRU1L4 +.....+ STRU1L364+ STRU1L365+ STRU1L366) - STRU1L1</p> <p>where:</p> <p>STRU1L# = daily lead emissions emitted through STRU 1 from EQUI 101, EQUI 102, EQUI 103, and EQUI 104, in pounds/day; STRU1L365RS = 365-day rolling sum lead emissions emitted through STRU 1 from EQUI 101, EQUI 102, EQUI 103, and EQUI 104 for the previous 365-day period, in pounds/year; EQUI101L = total lead stack emissions from EQUI 101, in pounds/day; EQUI102L = total lead stack emissions from EQUI 102, in pounds/day; EQUI103L = total lead stack emissions from EQUI 103, in pounds/day; and EQUI104L = total lead stack emissions from EQUI 104, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.96.15	<p>The Permittee is prohibited from releasing emissions of pollutants through STRU 1 from any emission units other than EQUI 101, EQUI 102, EQUI 103, EQUI 104, or EQUI 221 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 15	Smog Hog #1 Stack
5.97.1	<p>The Permittee shall limit emissions of PM < 10 micron \leq 0.03887 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.97.2	<p>The Permittee shall limit emissions of PM < 2.5 micron \leq 0.03887 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.97.3	<p>Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 2.116 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.97.4	<p>Emission Limit Effective on the 93rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.0230 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.97.5	<p>Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 15 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 15 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]</p>
5.97.6	<p>Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 15 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 15, in pounds per quarter 92-day sum, for the previous operating days since the date of</p>

Requirement number	Requirement and citation
	<p>permit issuance using formulas specified in this permit; 3) On the 93rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 15, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum annual lead emissions from STRU 15, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366th day following permit issuance and daily thereafter, the 365-day rolling sum annual lead emissions from STRU 15, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]</p>
5.97.7	<p>PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 15 using the following equation: $\text{STRU15PM10} = \text{EQUI121PM10} + \text{EQUI122PM10} + \text{EQUI123PM10}$ where: $\text{STRU15PM10} = \text{total daily average PM10 emissions emitted through STRU 15 from EQUI 121, EQUI 122, and EQUI 123, in pounds/hour;}$ $\text{EQUI121PM10} = \text{total daily average PM10 stack emissions from EQUI 121, in pounds/hour;}$ $\text{EQUI122PM10} = \text{total daily average PM10 stack emissions from EQUI 122, in pounds/hour; and}$ $\text{EQUI123PM10} = \text{total daily average PM10 stack emissions from EQUI 123, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]}$</p>
5.97.8	<p>PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 15 using the following equation: $\text{STRU15PM2.5} = \text{EQUI121PM2.5} + \text{EQUI122PM2.5} + \text{EQUI123PM2.5}$ where: $\text{STRU15PM2.5} = \text{total daily average PM2.5 emissions emitted through STRU 15 from EQUI 121, EQUI 122, and EQUI 123, in pounds/hour;}$ $\text{EQUI121PM2.5} = \text{total daily average PM2.5 stack emissions from EQUI 121, in pounds/hour;}$ $\text{EQUI122PM2.5} = \text{total daily average PM2.5 stack emissions from EQUI 122, in pounds/hour; and}$ $\text{EQUI123PM2.5} = \text{total daily average PM2.5 stack emissions from EQUI 123, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]}$</p>
5.97.9	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum daily lead emissions from STRU 15 using the following equations: $\text{STRU15L} = \text{EQUI121L} + \text{EQUI122L} + \text{EQUI123L}$ $\text{STRU15L3CS} = \text{STRU15L1} + \text{STRU15L2} + \text{STRU15L3} + \dots + \text{STRU15L90} + \text{STRU15L91} + \text{STRU15L92}$ where: $\text{STRU15L\#} = \text{total daily lead emissions emitted through STRU 15 from EQUI 121, EQUI 122, and EQUI 123, in pounds/day;}$ $\text{STRU15L3CS} = \text{cumulative sum daily lead emissions emitted through STRU 15 from EQUI 121, EQUI 122, and EQUI 123 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum;}$</p>

Requirement number	Requirement and citation
	EQUI121L = total lead stack emissions from EQUI 121, in pounds/day; EQUI122L = total lead stack emissions from EQUI 122, in pounds/day; and EQUI123L = total lead stack emissions from EQUI 123, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.97.10	Lead: Daily Calculations on the 93 rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 15 using the following equations: $\text{STRU15L} = \text{EQUI121L} + \text{EQUI122L} + \text{EQUI123L}$ $\text{STRU15L3A} = [(\text{STRU15L2} + \text{STRU15L3} + \text{STRU15L4} + \dots + \text{STRU15L91} + \text{STRU15L92} + \text{STRU15L93}) - \text{STRU15L1}] / 92 \text{ days}$ where: STRU15L# = total daily lead emissions emitted through STRU 15 from EQUI 121, EQUI 122, and EQUI 123, in pounds/day; STRU15L3A = 92-day rolling average lead emissions emitted through STRU 15 from EQUI 121, EQUI 122, and EQUI 123 for the previous 92-day period, in pounds/day; EQUI121L = total lead stack emissions from EQUI 121, in pounds/day; EQUI122L = total lead stack emissions from EQUI 122, in pounds/day; and EQUI123L = total lead stack emissions from EQUI 123, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.96.11	Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum annual lead emissions from STRU 15 using the following equations: $\text{STRU15L} = \text{EQUI121L} + \text{EQUI122L} + \text{EQUI123L}$ $\text{STRU15L365CS} = \text{STRU15L2} + \text{STRU15L3} + \text{STRU15L4} + \dots + \text{STRU15L363} + \text{STRU15L364} + \text{STRU15L365}$ where: STRU15L# = daily lead emissions emitted through STRU 15 from EQUI 121, EQUI 122, and EQUI 123, in pounds/day; STRU15L365CS = cumulative sum lead emissions emitted through STRU 15 from EQUI 121, EQUI 122, and EQUI 123 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI121L = total lead stack emissions from EQUI 121, in pounds/day; EQUI122L = total lead stack emissions from EQUI 122, in pounds/day; and EQUI123L = total lead stack emissions from EQUI 123, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.97.12	Lead: Daily Calculations on the 366 th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 15 using the following equations: $\text{STRU15L} = \text{EQUI121L} + \text{EQUI122L} + \text{EQUI123L}$ $\text{STRU15L365RS} = (\text{STRU15L2} + \text{STRU15L3} + \text{STRU15L4} + \dots + \text{STRU15L364} + \text{STRU15L365} + \text{STRU15L366}) - \text{STRU15L1}$ where: STRU15L# = daily lead emissions emitted through STRU 15 from EQUI 121, EQUI 122, and EQUI 123, in

Requirement number	Requirement and citation
	pounds/day; STRU15L365RS = 365-day rolling sum lead emissions emitted through STRU 15 from EQUI 121, EQUI 122, and EQUI 123 for the previous 365-day period, in pounds/year; EQUI121L = total lead stack emissions from EQUI 121, in pounds/day; EQUI122L = total lead stack emissions from EQUI 122, in pounds/day; and EQUI123L = total lead stack emissions from EQUI 123, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.97.13	The Permittee is prohibited from releasing emissions of pollutants through STRU 15 from any emission units other than EQUI 121, EQUI 122, or EQUI 123 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 16	Smog Hog #2 Stack
5.98.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.06388 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.98.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.06388 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.98.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 3.476 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.98.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.03778 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.98.5	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 16 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 16 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.98.6	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 16 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 16, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 16, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum annual lead emissions from STRU 16, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual

Requirement number	Requirement and citation
	lead emissions from STRU 16, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.98.7	<p>PM < 10 micron: Daily Calculations.</p> <p>The Permittee shall calculate the average daily PM10 emissions from STRU 16 using the following equation:</p> $\text{STRU16PM10} = \text{EQUI124PM10} + \text{EQUI125PM10} + \text{EQUI126PM10} + \text{EQUI157PM10}$ <p>where:</p> <p>STRU16PM10 = total daily average PM10 emissions emitted through STRU 16 from EQUI 124, EQUI 125, EQUI 126, and EQUI 157, in pounds/hour; EQUI124PM10 = total daily average PM10 stack emissions from EQUI 124, in pounds/hour; EQUI125PM10 = total daily average PM10 stack emissions from EQUI 125, in pounds/hour; EQUI126PM10 = total daily average PM10 stack emissions from EQUI 126, in pounds/hour; and EQUI157PM10 = total daily average PM10 stack emissions from EQUI 157, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.98.8	<p>PM < 2.5 micron: Daily Calculations.</p> <p>The Permittee shall calculate the average daily PM2.5 emissions from STRU 16 using the following equation:</p> $\text{STRU16PM2.5} = \text{EQUI124PM2.5} + \text{EQUI125PM2.5} + \text{EQUI126PM2.5} + \text{EQUI157PM2.5}$ <p>where:</p> <p>STRU16PM2.5 = total daily average PM2.5 emissions emitted through STRU 16 from EQUI 124, EQUI 125, EQUI 126, and EQUI 157, in pounds/hour; EQUI124PM2.5 = total daily average PM2.5 stack emissions from EQUI 124, in pounds/hour; EQUI125PM2.5 = total daily average PM2.5 stack emissions from EQUI 125, in pounds/hour; EQUI126PM2.5 = total daily average PM2.5 stack emissions from EQUI 126, in pounds/hour; and EQUI157PM2.5 = total daily average PM2.5 stack emissions from EQUI 157, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.98.9	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum).</p> <p>The Permittee shall calculate the cumulative sum daily lead emissions from STRU 16 using the following equations:</p> $\text{STRU16L} = \text{EQUI124L} + \text{EQUI125L} + \text{EQUI126L} + \text{EQUI157L}$ $\text{STRU16L3CS} = \text{STRU16L1} + \text{STRU16L2} + \text{STRU16L3} + \dots + \text{STRU16L90} + \text{STRU16L91} + \text{STRU16L92}$ <p>where:</p> <p>STRU16L# = total daily lead emissions emitted through STRU 16 from EQUI 124, EQUI 125, EQUI 126, and EQUI 157, in pounds/day; STRU16L3CS = cumulative sum daily lead emissions emitted through STRU 16 from EQUI 124, EQUI 125, EQUI 126, and EQUI 157 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI124L = total lead stack emissions from EQUI 124, in pounds/day; EQUI125L = total lead stack emissions from EQUI 125, in pounds/day; EQUI126L = total lead stack emissions from EQUI 126, in pounds/day; and EQUI157L = total lead stack emissions from EQUI 157 in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.98.10	Lead: Daily Calculations on the 93 rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average).

Requirement number	Requirement and citation
	<p>The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 16 using the following equations: $STRU16L = EQUI124L + EQUI125L + EQUI126L + EQUI157L$ $STRU16L3A = [(STRU16L2 + STRU16L3 + STRU16L4 + \dots + STRU16L91 + STRU16L92 + STRU16L93) - STRU16L1] / 92 \text{ days}$</p> <p>where:</p> <p>STRU16L# = total daily lead emissions emitted through STRU 16 from EQUI 124, EQUI 125, EQUI 126, and EQUI 157, in pounds/day; STRU16L3A = 92-day rolling average lead emissions emitted through STRU 16 from EQUI 124, EQUI 125, EQUI 126, and EQUI 157 for the previous 92-day period, in pounds/day; EQUI124L = total lead stack emissions from EQUI 124, in pounds/day; EQUI125L = total lead stack emissions from EQUI 125, in pounds/day; EQUI126L = total lead stack emissions from EQUI 126, in pounds/day; and EQUI157L = total lead stack emissions from EQUI 157, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.98.11	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum).</p> <p>The Permittee shall calculate the cumulative sum annual lead emissions from STRU 16 using the following equations: $STRU16L = EQUI124L + EQUI125L + EQUI126L + EQUI157L$ $STRU16L365CS = STRU16L2 + STRU16L3 + STRU16L4 + \dots + STRU16L363 + STRU16L364 + STRU16L365$</p> <p>where:</p> <p>STRU16L# = daily lead emissions emitted through STRU 16 from EQUI 124, EQUI 125, EQUI 126, and EQUI 157, in pounds/day; STRU16L365CS = Cumulative sum lead emissions emitted through STRU 16 from EQUI 124, EQUI 125, EQUI 126, and EQUI 157 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI124L = total lead stack emissions from EQUI 124, in pounds/day; EQUI125L = total lead stack emissions from EQUI 125, in pounds/day; EQUI126L = total lead stack emissions from EQUI 126, in pounds/day; and EQUI157L = total lead stack emissions from EQUI 157, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.98.12	<p>Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum).</p> <p>The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 16 using the following equations: $STRU16L = EQUI124L + EQUI125L + EQUI126L + EQUI157L$ $STRU16L365RS = (STRU16L2 + STRU16L3 + STRU16L4 + \dots + STRU16L364 + STRU16L365 + STRU16L366) - STRU16L1$</p> <p>where:</p> <p>STRU16L# = daily lead emissions emitted through STRU 16 from EQUI 124, EQUI 125, EQUI 126, and EQUI 157, in pounds/day; STRU16L365RS = 365-day rolling sum lead emissions emitted through STRU 16 from EQUI 124, EQUI 125, EQUI 126, and EQUI 157 for the previous 365-day period, in pounds/year; EQUI124L = total lead stack emissions from EQUI 124, in pounds/day;</p>

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 211 of 672

Requirement number	Requirement and citation
	EQUI125L = total lead stack emissions from EQUI 125, in pounds/day; EQUI126L = total lead stack emissions from EQUI 126, in pounds/day; and EQUI157L = total lead stack emissions from EQUI 157, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.98.13	The Permittee is prohibited from releasing emissions of pollutants through STRU 16 from any emission units other than EQUI 124, EQUI 125, EQUI 126, or EQUI 157 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 17	Smog Hog #3 Stack
5.99.1	The Permittee shall limit emissions of PM < 10 micron <= 0.01864 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.99.2	The Permittee shall limit emissions of PM < 2.5 micron <= 0.01864 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.99.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead <= 1.015 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.99.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead <= 0.01103 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.99.5	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 17 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 17 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.99.6	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 17 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 17, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 17, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum annual lead emissions from STRU 17, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual lead emissions from STRU 17, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]

Requirement number	Requirement and citation
5.99.7	<p>PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 17 using the following equation: $\text{STRU17PM10} = \text{EQUI127PM10} + \text{EQUI128PM10} + \text{EQUI129PM10}$</p> <p>where:</p> <p>STRU17PM10 = total daily average PM10 emissions emitted through STRU 17 from EQUI 127, EQUI 128, and EQUI 129, in pounds/hour; EQUI127PM10 = total daily average PM10 stack emissions from EQUI 127, in pounds/hour; EQUI128PM10 = total daily average PM10 stack emissions from EQUI 128, in pounds/hour; and EQUI129PM10 = total daily average PM10 stack emissions from EQUI 129, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.99.8	<p>PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 17 using the following equation: $\text{STRU17PM2.5} = \text{EQUI127PM2.5} + \text{EQUI128PM2.5} + \text{EQUI129PM2.5}$</p> <p>where:</p> <p>STRU17PM2.5 = total daily average PM2.5 emissions emitted through STRU 17 from EQUI 127, EQUI 128, and EQUI 129, in pounds/hour; EQUI127PM2.5 = total daily average PM2.5 stack emissions from EQUI 127, in pounds/hour; EQUI128PM2.5 = total daily average PM2.5 stack emissions from EQUI 128, in pounds/hour; and EQUI129PM2.5 = total daily average PM2.5 stack emissions from EQUI 129, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.99.9	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum daily lead emissions from STRU 17 using the following equations: $\text{STRU17L} = \text{EQUI127L} + \text{EQUI128L} + \text{EQUI129L}$ $\text{STRU17L3CS} = \text{STRU17L1} + \text{STRU17L2} + \text{STRU17L3} + \dots + \text{STRU17L90} + \text{STRU17L91} + \text{STRU17L92}$</p> <p>where:</p> <p>STRU17L# = total daily lead emissions emitted through STRU 17 from EQUI 127, EQUI 128, and EQUI 129, in pounds/day; STRU17L3CS = cumulative sum daily lead emissions emitted through STRU 17 from EQUI 127, EQUI 128, and EQUI 129 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI127L = total lead stack emissions from EQUI 127, in pounds/day; EQUI128L = total lead stack emissions from EQUI 128, in pounds/day; and EQUI129L = total lead stack emissions from EQUI 129 in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.99.10	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 17 using the following equations: $\text{STRU17L} = \text{EQUI127L} + \text{EQUI128L} + \text{EQUI129L}$ $\text{STRU17L3A} = [(\text{STRU17L2} + \text{STRU17L3} + \text{STRU17L4} + \dots + \text{STRU17L91} + \text{STRU17L92} + \text{STRU17L93}) - \text{STRU17L1}] / 92 \text{ days}$</p>

Requirement number	Requirement and citation
	<p>where:</p> <p>STRU17L# = total daily lead emissions emitted through STRU 17, in pounds /day; STRU17L3A = 92-day rolling average lead emissions emitted through STRU 17 for the previous 92-day period, in pounds/day; EQUI127L = total lead stack emissions from EQUI 127, in pounds/day; EQUI128L = total lead stack emissions from EQUI 128, in pounds/day; and EQUI129L = total lead stack emissions from EQUI 129, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.99.11	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum).</p> <p>The Permittee shall calculate the cumulative sum annual lead emissions from STRU 17 using the following equations: $STRU17L = EQUI127L + EQUI128L + EQUI129L$ $STRU17L365CS = STRU17L2 + STRU17L3 + STRU17L4 + \dots + STRU17L363 + STRU17L364 + STRU17L365$</p> <p>where:</p> <p>STRU17L# = daily lead emissions emitted through STRU 17 from EQUI 127, EQUI 128, and EQUI 129, in pounds/day; STRU17L365CS = cumulative sum lead emissions emitted through STRU 17 from EQUI 127, EQUI 128, and EQUI 129 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI127L = total lead stack emissions from EQUI 127, in pounds/day; EQUI128L = total lead stack emissions from EQUI 128, in pounds/day; and EQUI129L = total lead stack emissions from EQUI 129, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.99.12	<p>Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum).</p> <p>The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 17 using the following equations: $STRU17L = EQUI127L + EQUI128L + EQUI129L$ $STRU17L365RS = (STRU17L2 + STRU17L3 + STRU17L4 + \dots + STRU17L364 + STRU17L365 + STRU17L366) - STRU17L1$</p> <p>where:</p> <p>STRU17L# = daily lead emissions emitted through STRU 17, in pounds/day; STRU17L365RS = 365-day rolling sum lead emissions emitted through STRU 17 for the previous 365-day period, in pounds/year; EQUI127L = total lead stack emissions from EQUI 127, in pounds/day; EQUI128L = total lead stack emissions from EQUI 128, in pounds/day; and EQUI129L = total lead stack emissions from EQUI 129, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.99.13	<p>The Permittee is prohibited from releasing emissions of pollutants through STRU 17 from any emission units other than EQUI 127, EQUI 128, or EQUI 129 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 20	Smog Hog #6 Stack

Requirement number	Requirement and citation
5.100.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.02523 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.100.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.02523 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.100.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 1.373 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.100.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.01492 pounds per day 92-day rolling average. The 92-day rolling average must be each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.100.5	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 20 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 20 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.100.6	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 20 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 20, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 20, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum annual lead emissions from STRU 20, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual lead emissions from STRU 20, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.100.7	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 20 using the following equation: $\text{STRU20PM10} = \text{EQUI132PM10} + \text{EQUI133PM10}$ where: STRU20PM10 = total daily average PM10 emissions emitted through STRU 20, in pounds/hour; EQUI132PM10 = total daily average PM10 stack emissions from EQUI 132, in pounds/hour; and EQUI133PM10 = total daily average PM10 stack emissions from EQUI 133, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]

Requirement number	Requirement and citation
5.100.8	<p>PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 20 using the following equation: $\text{STRU20PM2.5} = \text{EQUI132PM2.5} + \text{EQUI133PM2.5}$</p> <p>where:</p> <p>STRU20PM2.5 = total daily average PM2.5 emissions emitted through STRU 20, in pounds/hour; EQUI132PM2.5 = total daily average PM2.5 stack emissions from EQUI 132, in pounds/hour; and EQUI133PM2.5 = total daily average PM2.5 stack emissions from EQUI 133, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.100.9	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum daily lead emissions from STRU 20 using the following equations: $\text{STRU20L} = \text{EQUI132L} + \text{EQUI133L}$ $\text{STRU20L3CS} = \text{STRU20L1} + \text{STRU20L2} + \text{STRU20L3} + \dots + \text{STRU20L90} + \text{STRU20L91} + \text{STRU20L92}$</p> <p>where:</p> <p>STRU20L# = total daily lead emissions emitted through STRU 20 from EQUI 132 and EQUI 133, in pounds/day; STRU20L3CS = cumulative sum daily lead emissions emitted through STRU 20 from EQUI 132 and EQUI 133 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI132L = total lead stack emissions from EQUI 132, in pounds/day; and EQUI133L = total lead stack emissions from EQUI 133 in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.100.10	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 20 using the following equations: $\text{STRU20L} = \text{EQUI132L} + \text{EQUI133L}$ $\text{STRU20L3A} = [(\text{STRU20L2} + \text{STRU20L3} + \text{STRU20L4} + \dots + \text{STRU20L91} + \text{STRU20L92} + \text{STRU20L93}) - \text{STRU20L1}] / 92 \text{ days}$</p> <p>where:</p> <p>STRU20L# = total daily lead emissions emitted through STRU 20, in pounds/day; STRU20L3A = 92-day rolling average lead emissions emitted through STRU 20 for the previous 92-day period, in pounds/day; EQUI132L = total lead stack emissions from EQUI 132, in pounds/day; and EQUI133L = total lead stack emissions from EQUI 133, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.100.11	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum annual lead emissions from STRU 20 using the following equations: $\text{STRU20L} = \text{EQUI132L} + \text{EQUI133L}$ $\text{STRU20L365CS} = \text{STRU20L2} + \text{STRU20L3} + \text{STRU20L4} + \dots + \text{STRU20L363} + \text{STRU20L364} + \text{STRU20L365}$</p> <p>where:</p>

Requirement number	Requirement and citation
	STRU20L# = daily lead emissions emitted through STRU 20 from EQUI 132 and EQUI 133, in pounds/day; STRU20L365CS = cumulative sum lead emissions emitted through STRU 20 from EQUI 132 and EQUI 133 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI132L = total lead stack emissions from EQUI 132, in pounds/day; and EQUI133L = total lead stack emissions from EQUI 133, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.100.12	Lead: Daily Calculations on the 366 th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 20 using the following equations: $STRU20L = EQUI132L + EQUI133L$ $STRU20L365RS = (STRU20L2 + STRU20L3 + STRU20L4 + \dots + STRU20L364 + STRU20L365 + STRU20L366) - STRU20L1$ where: STRU20L# = total daily lead emissions emitted through STRU 20, in pounds/day; STRU20L365RS = 365-day rolling sum lead emissions emitted through STRU 20 for the previous 365-day period, in pounds/year; EQUI132L = total lead stack emissions from EQUI 132, in pounds/day; and EQUI133L = total lead stack emissions from EQUI 133, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.100.13	The Permittee is prohibited from releasing emissions of pollutants through STRU 20 from any emission units other than EQUI 132 or EQUI 133 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 23	Smog Hog #9 Stack
5.101.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.02222 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.101.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.02222 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.101.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 1.209 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.101.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.01314 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.101.5	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 23 for the previous operating day using the formulas specified in this permit; and

Requirement number	Requirement and citation
	2) The total daily average hourly PM2.5 emissions from STRU 23 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.101.6	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 23 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 23, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 23, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum annual lead emissions from STRU 23, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual lead emissions from STRU 23, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.101.7	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 23 using the following equation: $\text{STRU23PM10} = \text{EQUI136PM10}$ where: $\text{STRU23PM10} = \text{total daily average PM10 emissions emitted through STRU 23, in pounds/hour; and}$ $\text{EQUI136PM10} = \text{total daily average PM10 stack emissions from EQUI 136, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]}$
5.101.8	PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 23 using the following equation: $\text{STRU23PM2.5} = \text{EQUI136PM2.5}$ where: $\text{STRU23PM2.5} = \text{total daily average PM2.5 emissions emitted through STRU 23, in pounds/hour; and}$ $\text{EQUI136PM2.5} = \text{total daily average PM2.5 stack emissions from EQUI 136, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]}$
5.101.9	Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum daily lead emissions from STRU 23 using the following equations: $\text{STRU23L} = \text{EQUI136L}$ $\text{STRU23L3CS} = \text{STRU23L1} + \text{STRU23L2} + \text{STRU23L3} + \dots + \text{STRU23L90} + \text{STRU23L91} + \text{STRU23L92}$ where: $\text{STRU23L\#} = \text{total daily lead emissions emitted through STRU 23 from EQUI 136, in pounds/day;}$ $\text{STRU23L3CS} = \text{cumulative sum daily lead emissions emitted through STRU 23 from EQUI 136 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; and}$

Requirement number	Requirement and citation
	EQUI136L = total lead stack emissions from EQUI 136, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.101.10	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average).</p> <p>The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 23 using the following equations: $STRU23L = EQUI136L$ $STRU23L3A = [(STRU23L2 + STRU23L3 + STRU23L4 + \dots + STRU23L91 + STRU23L92 + STRU23L93) - STRU23L1] / 92 \text{ days}$</p> <p>where:</p> <p>STRU23L# = total daily lead emissions emitted through STRU 23, in pounds/day; STRU23L3A = 92-day rolling average lead emissions emitted through STRU 23 for the previous 92-day period, in pounds/day; and EQUI136L = total lead stack emissions from EQUI 136, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.101.11	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum).</p> <p>The Permittee shall calculate the cumulative sum annual lead emissions from STRU 23 using the following equations: $STRU23L = EQUI136L$ $STRU23L365CS = STRU23L2 + STRU23L3 + STRU23L4 + \dots + STRU23L363 + STRU23L364 + STRU23L365$</p> <p>where:</p> <p>STRU23L# = daily lead emissions emitted through STRU 23 from EQUI 136, in pounds/day; STRU23L365CS = cumulative sum lead emissions emitted through STRU 23 from EQUI 136 for the first 365 days beginning on permit issuance date, in pounds/year; and EQUI136L = total lead stack emissions from EQUI 136, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.101.12	<p>Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum).</p> <p>The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 23 using the following equations: $STRU23L = EQUI136L$ $STRU23L365RS = (STRU23L2 + STRU23L3 + STRU23L4 + \dots + STRU23L364 + STRU23L365 + STRU23L366) - STRU23L1$</p> <p>where:</p> <p>STRU23L# = total daily lead emissions emitted through STRU 23, in pounds/day; STRU23L365RS = 365-day rolling average lead emissions emitted through STRU 23 for the previous 365-day period, in pounds/year; and EQUI136L = total lead stack emissions from EQUI 136, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.101.13	The Permittee is prohibited from releasing emissions of pollutants through STRU 23 from any emission units other than EQUI 136 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-

Requirement number	Requirement and citation
	7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
STRU 24	Smog Hog #10 Stack
5.102.1	The Permittee shall limit emissions of PM < 10 micron <= 0.02202 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.102.2	The Permittee shall limit emissions of PM < 2.5 micron <= 0.02202 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.102.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead <= 1.198 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.102.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead <= 0.01302 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.102.5	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 24 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 24 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.102.6	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 24 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 24, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 24, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum annual lead emissions from STRU 24, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual lead emissions from STRU 24, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.102.7	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 24 using the following equation: $\text{STRU24PM10} = \text{EQUI137PM10} + \text{EQUI138PM10}$ where: $\text{STRU24PM10} = \text{total daily average PM10 emissions emitted through STRU 24, in pounds/hour;}$ $\text{EQUI137PM10} = \text{total daily average PM10 stack emissions from EQUI 137, in pounds/hour;}$ and

Requirement number	Requirement and citation
	EQUI138PM10 = total daily average PM10 stack emissions from EQUI 138, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.102.8	<p>PM < 2.5 micron: Daily Calculations.</p> <p>The Permittee shall calculate the average daily PM2.5 emissions from STRU 24 using the following equation:</p> $\text{STRU24PM2.5} = \text{EQUI137PM2.5} + \text{EQUI138PM2.5}$ <p>where:</p> <p>STRU24PM2.5 = total daily average PM2.5 emissions emitted through STRU 24, in pounds/hour; EQUI137PM2.5 = total daily average PM2.5 stack emissions from EQUI 137, in pounds/hour; and EQUI138PM2.5 = total daily average PM2.5 stack emissions from EQUI 138, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.102.9	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum).</p> <p>The Permittee shall calculate the cumulative sum daily lead emissions from STRU 24 using the following equations:</p> $\text{STRU24L} = \text{EQUI137L} + \text{EQUI138L}$ $\text{STRU24L3CS} = \text{STRU24L1} + \text{STRU24L2} + \text{STRU24L3} + \dots + \text{STRU24L90} + \text{STRU24L91} + \text{STRU24L92}$ <p>where:</p> <p>STRU24L# = total daily lead emissions emitted through STRU 24 from EQUI 137 and EQUI 138, in pounds/day; STRU24L3CS = cumulative sum daily lead emissions emitted through STRU 24 from EQUI 137 and EQUI 138 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI137L = total lead stack emissions from EQUI 137, in pounds/day and EQUI138L = total lead stack emissions from EQUI 138, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.102.10	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average).</p> <p>The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 24 using the following equations:</p> $\text{STRU24L} = \text{EQUI137L} + \text{EQUI138L}$ $\text{STRU24L3A} = [(\text{STRU24L2} + \text{STRU24L3} + \text{STRU24L4} + \dots + \text{STRU24L91} + \text{STRU24L92} + \text{STRU24L93}) - \text{STRU24L1}] / 92 \text{ days}$ <p>where:</p> <p>STRU24L# = total daily lead emissions emitted through STRU 24, in pounds/day; STRU24L3A = 92-day rolling average lead emissions emitted through STRU 24 for the previous 92-day period, in pounds/day; EQUI137L = total lead stack emissions from EQUI 137, in pounds/day; and EQUI138L = total lead stack emissions from EQUI 138, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.102.11	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum).</p> <p>The Permittee shall calculate the cumulative sum annual lead emissions from STRU 24 using the following equations:</p>

Requirement number	Requirement and citation
	<p>STRU24L = EQUI137L + EQUI138L STRU24L365CS = STRU24L2 + STRU24L3 + STRU24L4 + . . . + STRU24L363+ STRU24L364+ STRU24L365</p> <p>where:</p> <p>STRU24L# = daily lead emissions emitted through STRU 24 from EQUI 137 and EQUI 138, in pounds/day; STRU24L365CS = cumulative sum lead emissions emitted through STRU 24 from EQUI 137 and EQUI 138 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI137L = total lead stack emissions from EQUI 137, in pounds/day; and EQUI138L = total lead stack emissions from EQUI 138, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.102.12	<p>Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 24 using the following equations: STRU24L = EQUI137L + EQUI138L STRU24L365RS = (STRU24L2 + STRU24L3 + STRU24L4 + + STRU24L364 + STRU24L365 + STRU24L366) - STRU24L1</p> <p>where:</p> <p>STRU24L# = total daily lead emissions emitted through STRU 24, in pounds/day; STRU24L365RS = 365-day rolling sum lead emissions emitted through STRU 24 for the previous 365-day period, in pounds/year; EQUI137L = total lead stack emissions from EQUI 137, in pounds/day; and EQUI138L = total lead stack emissions from EQUI 138, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.102.13	<p>The Permittee is prohibited from releasing emissions of pollutants through STRU 24 from any emission units other than EQUI 137 or EQUI 138 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 25	Smog Hog #11 Stack
5.103.1	<p>The Permittee shall limit emissions of PM < 10 micron <= 0.02641 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.103.2	<p>The Permittee shall limit emissions of PM < 2.5 micron <= 0.02641 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.103.3	<p>Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead <= 1.437 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.103.4	<p>Emission Limit Effective on the 93rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead <= 0.01562 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>

Requirement number	Requirement and citation
5.103.5	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 25 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 25 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.103.6	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 25 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 25, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 25, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum annual lead emissions from STRU 25, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual lead emissions from STRU 25, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.103.7	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 25 using the following equation: $\text{STRU25PM10} = \text{EQUI139PM10} + \text{EQUI140PM10}$ where: STRU25PM10 = total daily average PM10 emissions emitted through STRU 25, in pounds/hour; EQUI139PM10 = total daily average PM10 stack emissions from EQUI 139, in pounds/hour; and EQUI140PM10 = total daily average PM10 stack emissions from EQUI 140, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.103.8	PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 25 using the following equation: $\text{STRU25PM2.5} = \text{EQUI139PM2.5} + \text{EQUI140PM2.5}$ where: STRU25PM2.5 = total daily average PM2.5 emissions emitted through STRU 25, in pounds/hour; EQUI139PM2.5 = total daily average PM2.5 stack emissions from EQUI 139, in pounds/hour; and EQUI140PM2.5 = total daily average PM2.5 stack emissions from EQUI 140, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.103.9	Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum daily lead emissions from STRU 25 using the following equations: $\text{STRU25L} = \text{EQUI139L} + \text{EQUI140L}$ $\text{STRU25L3CS} = \text{STRU25L1} + \text{STRU25L2} + \text{STRU25L3} + \dots + \text{STRU25L90} + \text{STRU25L91} + \text{STRU25L92}$

Requirement number	Requirement and citation
	<p>where:</p> <p>STRU25L# = total daily lead emissions emitted through STRU 25 from EQUI 139 and EQUI 140, in pounds/day; STRU25L3CS = cumulative sum daily lead emissions emitted through STRU 25 from EQUI 139 and EQUI 140 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI139L = total lead stack emissions from EQUI 139, in pounds/day; and EQUI140L = total lead stack emissions from EQUI 140, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.103.10	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 25 using the following equations: $\text{STRU25L} = \text{EQUI139L} + \text{EQUI140L}$ $\text{STRU25L3A} = [(\text{STRU25L2} + \text{STRU25L3} + \text{STRU25L4} + \dots + \text{STRU25L91} + \text{STRU25L92} + \text{STRU25L93}) - \text{STRU25L1}] / 92 \text{ days}$</p> <p>where:</p> <p>STRU25L# = total daily lead emissions emitted through STRU 25, in pounds/day; STRU25L3A = 92-day rolling average lead emissions emitted through STRU 25 for the previous 92-day period, in pounds/day; EQUI139L = total lead stack emissions from EQUI 139, in pounds/day; and EQUI140L = total lead stack emissions from EQUI 140, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.103.11	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum annual lead emissions from STRU 25 using the following equations: $\text{STRU25L} = \text{EQUI139L} + \text{EQUI140L}$ $\text{STRU25L365CS} = \text{STRU25L2} + \text{STRU25L3} + \text{STRU25L4} + \dots + \text{STRU25L363} + \text{STRU25L364} + \text{STRU25L365}$</p> <p>where:</p> <p>STRU25L# = daily lead emissions emitted through STRU 25 from EQUI 139 and EQUI 140, in pounds/day; STRU25L365CS = cumulative sum lead emissions emitted through STRU 25 from EQUI 139 and EQUI 140 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI139L = total lead stack emissions from EQUI 139, in pounds/day; and EQUI140L = total lead stack emissions from EQUI 140, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.103.12	<p>Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 25 using the following equations: $\text{STRU25L} = \text{EQUI139L} + \text{EQUI140L}$ $\text{STRU25L365RS} = (\text{STRU25L2} + \text{STRU25L3} + \text{STRU25L4} + \dots + \text{STRU25L364} + \text{STRU25L365} + \text{STRU25L366}) - \text{STRU25L1}$</p>

Requirement number	Requirement and citation
	where: STRU25L# = total daily lead emissions emitted through STRU 25, in pounds/day; STRU25L365RS = 365-day rolling sum lead emissions emitted through STRU 25 for the previous 365-day period, in pounds/year; EQUI139L = total lead stack emissions from EQUI 139, in pounds/day; and EQUI140L = total lead stack emissions from EQUI 140, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.103.13	The Permittee is prohibited from releasing emissions of pollutants through STRU 25 from any emission units other than EQUI 139 or EQUI 140 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 26	Smog Hog #12 Stack
5.104.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.05521 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.104.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.05521 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.104.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 3.004 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.104.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.03265 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.104.5	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 26 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 26 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.104.6	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 26 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 26, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 26, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum annual lead emissions from STRU 26, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and

Requirement number	Requirement and citation
	5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual lead emissions from STRU 26, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.104.7	<p>PM < 10 micron: Daily Calculations.</p> <p>The Permittee shall calculate the average daily PM10 emissions from STRU 26 using the following equation:</p> $\text{STRU26PM10} = \text{EQUI141PM10} + \text{EQUI142PM10} + \text{EQUI143PM10} + \text{EQUI155PM10}$ <p>where:</p> <p>STRU26PM10 = total daily average PM10 emissions emitted through STRU 26, in pounds/hour; EQUI141PM10 = total daily average PM10 stack emissions from EQUI 141, in pounds/hour; EQUI142PM10 = total daily average PM10 stack emissions from EQUI 142, in pounds/hour; EQUI143PM10 = total daily average PM10 stack emissions from EQUI 143, in pounds/hour; and EQUI155PM10 = total daily average PM10 stack emissions from EQUI 155, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.104.8	<p>PM < 2.5 micron: Daily Calculations.</p> <p>The Permittee shall calculate the average daily PM2.5 emissions from STRU 26 using the following equation:</p> $\text{STRU26PM2.5} = \text{EQUI141PM2.5} + \text{EQUI142PM2.5} + \text{EQUI143PM2.5} + \text{EQUI155PM2.5}$ <p>where:</p> <p>STRU26PM2.5 = total daily average PM2.5 emissions emitted through STRU 26, in pounds/hour; EQUI141PM2.5 = total daily average PM2.5 stack emissions from EQUI 141, in pounds/hour; EQUI142PM2.5 = total daily average PM2.5 stack emissions from EQUI 142, in pounds/hour; EQUI143PM2.5 = total daily average PM2.5 stack emissions from EQUI 143, in pounds/hour; and EQUI155PM2.5 = total daily average PM2.5 stack emissions from EQUI 155, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.104.9	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum).</p> <p>The Permittee shall calculate the cumulative sum daily lead emissions from STRU 26 using the following equations:</p> $\text{STRU26L} = \text{EQUI141L} + \text{EQUI142L} + \text{EQUI143L} + \text{EQUI155L}$ $\text{STRU26L3CS} = \text{STRU26L1} + \text{STRU26L2} + \text{STRU26L3} + \dots + \text{STRU26L90} + \text{STRU26L91} + \text{STRU26L92}$ <p>where:</p> <p>STRU26L# = total daily lead emissions emitted through STRU 26 from EQUI 141, EQUI 142, EQUI 143, and EQUI 155, in pounds/day; STRU26L3CS = cumulative sum daily lead emissions emitted through STRU 26 from EQUI 141, EQUI 142, EQUI 143, and EQUI 155 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI141L = total lead stack emissions from EQUI 141, in pounds/day; EQUI142L = total lead stack emissions from EQUI 142, in pounds/day; EQUI143L = total lead stack emissions from EQUI 143, in pounds/day; and EQUI155L = total lead stack emissions from EQUI 155, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.104.10	Lead: Daily Calculations on the 93 rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average).

Requirement number	Requirement and citation
	<p>The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 26 using the following equations: $\text{STRU26L} = \text{EQUI141L} + \text{EQUI142L} + \text{EQUI143L} + \text{EQUI155L}$ $\text{STRU26L3A} = [(\text{STRU26L2} + \text{STRU26L3} + \text{STRU26L4} + \dots + \text{STRU26L91} + \text{STRU26L92} + \text{STRU26L93}) - \text{STRU26L1}] / 92 \text{ days}$</p> <p>where:</p> <p>STRU26L# = total daily lead emissions emitted through STRU 26, in pounds/day; STRU26L3A = 92-day rolling average lead emissions emitted through STRU 26 for the previous 92-day period, in pounds/day; EQUI141L = total lead stack emissions from EQUI 141, in pounds/day; EQUI142L = total lead stack emissions from EQUI 142, in pounds/day; EQUI143L = total lead stack emissions from EQUI 143, in pounds/day; and EQUI155L = total lead stack emissions from EQUI 155, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.104.11	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum).</p> <p>The Permittee shall calculate the cumulative sum annual lead emissions from STRU 26 using the following equations: $\text{STRU26L} = \text{EQUI141L} + \text{EQUI142L} + \text{EQUI143L} + \text{EQUI155L}$ $\text{STRU26L365CS} = \text{STRU26L2} + \text{STRU26L3} + \text{STRU26L4} + \dots + \text{STRU26L363} + \text{STRU26L364} + \text{STRU26L365}$</p> <p>where:</p> <p>STRU26L# = daily lead emissions emitted through STRU 26 from EQUI 141, EQUI 142, EQUI 143, and EQUI 155, in pounds/day; STRU26L365CS = cumulative sum lead emissions emitted through STRU 26 from EQUI 141, EQUI 142, EQUI 143, and EQUI 155 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI141L = total lead stack emissions from EQUI 141, in pounds/day; EQUI142L = total lead stack emissions from EQUI 142, in pounds/day; EQUI143L = total lead stack emissions from EQUI 143, in pounds/day; and EQUI155L = total lead stack emissions from EQUI 155, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.104.12	<p>Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum).</p> <p>The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 26 using the following equations: $\text{STRU26L} = \text{EQUI141L} + \text{EQUI142L} + \text{EQUI143L} + \text{EQUI155L}$ $\text{STRU26L365RS} = (\text{STRU26L2} + \text{STRU26L3} + \text{STRU26L4} + \dots + \text{STRU26L364} + \text{STRU26L365} + \text{STRU26L366}) - \text{STRU26L1}$</p> <p>where:</p> <p>STRU26L# = daily lead emissions emitted through STRU 26, in pounds/day; STRU26L365RS = 365-day rolling sum lead emissions emitted through STRU 26 for the previous 365-day period, in pounds/year; EQUI141L = total lead stack emissions from EQUI 142, in pounds/day; EQUI142L = total lead stack emissions from EQUI 142, in pounds/day; EQUI143L = total lead stack emissions from EQUI 143, in pounds/day; and</p>

Requirement number	Requirement and citation
	EQUI155L = total lead stack emissions from EQUI 155, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.104.13	The Permittee is prohibited from releasing emissions of pollutants through STRU 26 from any emission units other than EQUI 141, EQUI 142, EQUI 143, or EQUI 155 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 30	Smog Hog #16 Stack
5.105.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.06048 pounds per hour daily average. [Minn. R. 7007.0800, subps. (A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.105.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.06048 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.105.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 3.291 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.105.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.03577 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.105.5	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 30 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 30 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.105.6	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 30 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 30, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 30, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum annual lead emissions from STRU 30, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual lead emissions from STRU 30, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.105.7	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 30 using the following equation:

Requirement number	Requirement and citation
	<p>STRU30PM10 = EQUI146PM10 + EQUI158PM10</p> <p>where:</p> <p>STRU30PM10 = total daily average PM10 emissions emitted through STRU 30, in pounds/hour; EQUI146PM10 = total daily average PM10 stack emissions from EQUI 146, in pounds/hour; and EQUI158PM10 = total daily average PM10 stack emissions from EQUI 158, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.105.8	<p>PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 30 using the following equation: $\text{STRU30PM2.5} = \text{EQUI146PM2.5} + \text{EQUI158PM2.5}$</p> <p>where:</p> <p>STRU30PM2.5 = total daily average PM2.5 emissions emitted through STRU 30, in pounds/hour; EQUI146PM2.5 = total daily average PM2.5 stack emissions from EQUI 146, in pounds/hour; and EQUI158PM2.5 = total daily average PM2.5 stack emissions from EQUI 158, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.105.9	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum daily lead emissions from STRU 30 using the following equations: $\text{STRU30L} = \text{EQUI146L} + \text{EQUI158L}$ $\text{STRU30L3CS} = \text{STRU30L1} + \text{STRU30L2} + \text{STRU30L3} + \dots + \text{STRU30L90} + \text{STRU30L91} + \text{STRU30L92}$</p> <p>where:</p> <p>STRU30L# = total daily lead emissions emitted through STRU 30 from EQUI 146 and EQUI 158, in pounds/day; STRU30L3CS = cumulative sum daily lead emissions emitted through STRU 30 from EQUI 146 and EQUI 158 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI146L = total lead stack emissions from EQUI 146, in pounds/day; and EQUI158L = total lead stack emissions from EQUI 158, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.105.10	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 30 using the following equations: $\text{STRU30L} = \text{EQUI146L} + \text{EQUI158L}$ $\text{STRU30L3A} = [(\text{STRU30L2} + \text{STRU30L3} + \text{STRU30L4} + \dots + \text{STRU30L91} + \text{STRU30L92} + \text{STRU30L93}) - \text{STRU30L1}] / 92 \text{ days}$</p> <p>where:</p> <p>STRU30L# = total daily lead emissions emitted through STRU 30, in pounds/day; STRU30L3A = 92-day rolling average lead emissions emitted through STRU 30 for the previous 92-day period, in pounds/day; EQUI146L = total lead stack emissions from EQUI 146, in pounds/day; and</p>

Requirement number	Requirement and citation
	EQUI158L = total lead stack emissions from EQUI 158, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.105.11	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum).</p> <p>The Permittee shall calculate the cumulative sum annual lead emissions from STRU 30 using the following equations: $STRU30L = EQUI146L + EQUI158L$ $STRU30L365CS = STRU30L2 + STRU30L3 + STRU30L4 + \dots + STRU30L363 + STRU30L364 + STRU30L365$</p> <p>where:</p> <p>STRU30L# = daily lead emissions emitted through STRU 30 from EQUI 146 and EQUI 158, in pounds/day; STRU30L365CS = cumulative sum lead emissions emitted through STRU 30 from EQUI 146 and EQUI 158 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI146L = total lead stack emissions from EQUI 146, in pounds/day; and EQUI158L = total lead stack emissions from EQUI 158, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.105.12	<p>Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum).</p> <p>The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 30 using the following equations: $STRU30L = EQUI146L + EQUI158L$ $STRU30L365RS = (STRU30L2 + STRU30L3 + STRU30L4 + \dots + STRU30L364 + STRU30L365 + STRU30L366) - STRU30L1$</p> <p>where:</p> <p>STRU30L# = total daily lead emissions emitted through STRU 30, in pounds/day; STRU30L365RS = 365-day rolling sum lead emissions emitted through STRU 30 for the previous 365-day period, in pounds/year; EQUI146L = total lead stack emissions from EQUI 146, in pounds/day; and EQUI158L = total lead stack emissions from EQUI 158, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.105.13	The Permittee is prohibited from releasing emissions of pollutants through STRU 30 from any emission units other than EQUI 146 or EQUI 158 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 31	Smog Hog #17 Stack
5.106.1	The Permittee shall limit emissions of PM < 10 micron ≤ 0.02982 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.106.2	The Permittee shall limit emissions of PM < 2.5 micron ≤ 0.02982 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.106.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead ≤ 3.291 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as

Requirement number	Requirement and citation
	described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.106.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.01764 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.106.5	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 31 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 31 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.106.6	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 31 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 31, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 31, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum annual lead emissions from STRU 31, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual lead emissions from STRU 31, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.106.7	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 31 using the following equation: $\text{STRU31PM10} = \text{EQUI147PM10}$ where: $\text{STRU31PM10} = \text{total daily average PM10 emissions emitted through STRU 31, in pounds/hour; and}$ $\text{EQUI147PM10} = \text{total daily average PM10 stack emissions from EQUI 147, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]}$
5.106.8	PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 31 using the following equation: $\text{STRU31PM2.5} = \text{EQUI147PM2.5}$ where: $\text{STRU31PM2.5} = \text{total daily average PM2.5 emissions emitted through STRU 31, in pounds/hour; and}$ $\text{EQUI147PM2.5} = \text{total daily average PM2.5 stack emissions from EQUI 147, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]}$
5.106.9	Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum).

Requirement number	Requirement and citation
	<p>The Permittee shall calculate the cumulative sum daily lead emissions from STRU 31 using the following equations: $STRU31L = EQUI147L$ $STRU31L3CS = STRU31L1 + STRU31L2 + STRU31L3 + \dots + STRU31L90 + STRU31L91 + STRU31L92$</p> <p>where:</p> <p>$STRU31L\#$ = total daily lead emissions emitted through STRU 31 from EQUI 147, in pounds/day; $STRU31L3CS$ = cumulative sum daily lead emissions emitted through STRU 31 from EQUI 147 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; and $EQUI147L$ = total lead stack emissions from EQUI 147, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.106.10	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 31 using the following equations: $STRU31L = EQUI147L$ $STRU31L3A = [(STRU31L2 + STRU31L3 + STRU31L4 + \dots + STRU31L91 + STRU31L92 + STRU31L93) - STRU31L1] / 92 \text{ days}$</p> <p>where:</p> <p>$STRU31L\#$ = total daily lead emissions emitted through STRU 31, in pounds/day; $STRU31L3A$ = 92-day rolling average lead emissions emitted through STRU 31 for the previous 92-day period, in pounds/day; and $EQUI147L$ = total lead stack emissions from EQUI 147, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.106.11	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum annual lead emissions from STRU 31 using the following equations: $STRU31L = EQUI147L$ $STRU31L365CS = STRU31L2 + STRU31L3 + STRU31L4 + \dots + STRU31L363 + STRU31L364 + STRU31L365$</p> <p>where:</p> <p>$STRU31L\#$ = daily lead emissions emitted through STRU 31 from EQUI 147, in pounds/day; $STRU31L365CS$ = cumulative sum lead emissions emitted through STRU 31 from EQUI 147 for the first 365 days beginning on permit issuance date, in pounds/year; and $EQUI147L$ = total lead stack emissions from EQUI 147, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.106.12	<p>Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 31 using the following equations: $STRU31L = EQUI147L$ $STRU31L365RS = (STRU31L2 + STRU31L3 + STRU31L4 + \dots + STRU31L364 + STRU31L365 + STRU31L366) - STRU31L1$</p> <p>where:</p>

Requirement number	Requirement and citation
	STRU31L# = total daily lead emissions emitted through STRU 31, in pounds/day; STRU31L365RS = 365-day rolling sum lead emissions emitted through STRU 31 for the previous 365-day period, in pounds/year; and EQUI147L = total lead stack emissions from EQUI 147, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.106.13	The Permittee is prohibited from releasing emissions of pollutants through STRU 31 from any emission units other than EQUI 147 obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 32	Smog Hog #18 Stack
5.107.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.03007 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.107.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.03007 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.107.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 1.645 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.107.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.01788 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.107.5	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 32 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 32 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.107.6	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 32 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 32, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 32, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum annual lead emissions from STRU 32, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual lead emissions from STRU 32, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]

Requirement number	Requirement and citation
5.107.7	<p>PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 32 using the following equation: $\text{STRU32PM10} = \text{EQUI149PM10} + \text{EQUI150PM10}$</p> <p>where:</p> <p>STRU32PM10 = total daily average PM10 emissions emitted through STRU 32, in pounds/hour; EQUI149PM10 = total daily average PM10 stack emissions from EQUI 149, in pounds/hour; and EQUI150PM10 = total daily average PM10 stack emissions from EQUI 150, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.107.8	<p>PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 32 using the following equation: $\text{STRU32PM2.5} = \text{EQUI149PM2.5} + \text{EQUI150PM2.5}$</p> <p>where:</p> <p>STRU32PM2.5 = total daily average PM2.5 emissions emitted through STRU 32, in pounds/hour; EQUI149PM2.5 = total daily average PM2.5 stack emissions from EQUI 149, in pounds/hour; and EQUI150PM2.5 = total daily average PM2.5 stack emissions from EQUI 150, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.107.9	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum daily lead emissions from STRU 32 using the following equations: $\text{STRU32L} = \text{EQUI149L} + \text{EQUI150L}$ $\text{STRU32L3CS} = \text{STRU32L1} + \text{STRU32L2} + \text{STRU32L3} + \dots + \text{STRU32L90} + \text{STRU32L91} + \text{STRU32L92}$</p> <p>where:</p> <p>STRU32L# = total daily lead emissions emitted through STRU 32 from EQUI 149 and EQUI 150, in pounds/day; STRU32L3CS = cumulative sum daily lead emissions emitted through STRU 32 from EQUI 149 and EQUI 150 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI149L = total lead stack emissions from EQUI 149, in pounds/day; and EQUI150L = total lead stack emissions from EQUI 150, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.107.10	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 32 using the following equations: $\text{STRU32L} = \text{EQUI146L} + \text{EQUI158L}$ $\text{STRU32L3A} = [(\text{STRU32L2} + \text{STRU32L3} + \text{STRU32L4} + \dots + \text{STRU32L91} + \text{STRU32L92} + \text{STRU32L93}) - \text{STRU32L1}] / 92 \text{ days}$</p> <p>where:</p> <p>STRU32L# = total daily lead emissions emitted through STRU 32, in pounds/day; STRU32L3A = 92-day rolling average lead emissions emitted through STRU 32 for the previous 92-day</p>

Requirement number	Requirement and citation
	period, in pounds/day; EQUI149L = total lead stack emissions from EQUI 149, in pounds/day; and EQUI150L = total lead stack emissions from EQUI 150, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.107.11	Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum annual lead emissions from STRU 32 using the following equations: $STRU32L = EQUI149L + EQUI150L$ $STRU32L365CS = STRU32L2 + STRU32L3 + STRU32L4 + \dots + STRU32L363 + STRU32L364 + STRU32L365$ where: STRU32L# = daily lead emissions emitted through STRU 32 from EQUI 149 and EQUI 150, in pounds/day; STRU32L365CS = cumulative sum lead emissions emitted through STRU 32 from EQUI 149 and EQUI 150 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI149L = total lead stack emissions from EQUI 149, in pounds/day; and EQUI150L = total lead stack emissions from EQUI 150, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.107.12	Lead: Daily Calculations on the 366 th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 32 using the following equations: $STRU32L = EQUI149L + EQUI150L$ $STRU32L365RS = (STRU32L2 + STRU32L3 + STRU32L4 + \dots + STRU32L364 + STRU32L365 + STRU32L366) - STRU32L1$ where: STRU32L# = total daily lead emissions emitted through STRU 32, in pounds/day; STRU32L365RS = 365-day rolling sum lead emissions emitted through STRU 32 for the previous 365-day period, in pounds/year; EQUI149L = total lead stack emissions from EQUI 149, in pounds/day; and EQUI150L = total lead stack emissions from EQUI 150, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.107.13	The Permittee is prohibited from releasing emissions of pollutants through STRU 32 from any emission units other than EQUI 149 or EQUI 150 obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 33	Smog Hog #19 Stack
5.108.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.05370 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.108.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.05370 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.108.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 2.922 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.108.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.03176 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.108.5	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 33 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 33 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.108.6	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 33 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 33, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 33, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum annual lead emissions from STRU 33, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual lead emissions from STRU 33, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.108.7	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 33 using the following equation: $\text{STRU33PM10} = \text{EQUI152PM10} + \text{EQUI156PM10}$ where: $\text{STRU33PM10} = \text{total daily average PM10 emissions emitted through STRU 33, in pounds/hour;}$ $\text{EQUI152PM10} = \text{total daily average PM10 stack emissions from EQUI 152, in pounds/hour; and}$ $\text{EQUI156PM10} = \text{total daily average PM10 stack emissions from EQUI 156, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]}$
5.108.8	PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 33 using the following equation: $\text{STRU33PM2.5} = \text{EQUI152PM2.5} + \text{EQUI156PM2.5}$ where: $\text{STRU33PM2.5} = \text{total daily average PM2.5 emissions emitted through STRU 33, in pounds/hour;}$

Requirement number	Requirement and citation
	EQUI152PM2.5 = total daily average PM2.5 stack emissions from EQUI 152, in pounds/hour; and EQUI156PM2.5 = total daily average PM2.5 stack emissions from EQUI 156, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.108.9	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-day Cumulative Sum).</p> <p>The Permittee shall calculate the cumulative sum daily lead emissions from STRU 33 using the following equations: STRU33L = EQUI152L + EQUI156L STRU33L3CS = STRU33L1 + STRU33L2 + STRU33L3 +...+ STRU33L90 + STRU33L91 + STRU33L92</p> <p>where:</p> <p>STRU33L# = total daily lead emissions emitted through STRU 33 from EQUI 152 and EQUI 156, in pounds/day; STRU33L3CS = cumulative sum daily lead emissions emitted through STRU 33 from EQUI 152 and EQUI 156 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI152L = total lead stack emissions from EQUI 152, in pounds/day; and EQUI156L = total lead stack emissions from EQUI 156, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.108.8	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average).</p> <p>The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 33 the following equations: STRU33L = EQUI152L + EQUI156L STRU33L3A = [(STRU33L2 + STRU33L3 + STRU33L4 +...+ STRU33L91 + STRU33L92 + STRU33L93) - STRU33L1] / 92 days</p> <p>where:</p> <p>STRU33L# = total daily lead emissions emitted through STRU 33, in pounds/day; STRU33L3A = 92-day rolling average lead emissions emitted through STRU 33 for the previous 92-day period, in pounds/day; EQUI152L = total lead stack emissions from EQUI 152, in pounds/day; and EQUI156L = total lead stack emissions from EQUI 156, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.108.11	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum).</p> <p>The Permittee shall calculate the cumulative sum annual lead emissions from STRU 33 using the following equations: STRU33L = EQUI152L + EQUI156L STRU33L365CS = STRU33L2 + STRU33L3 + STRU33L4 +. . . + STRU33L363+ STRU33L364+ STRU33L365</p> <p>where:</p> <p>STRU33L# = daily lead emissions emitted through STRU 33 from EQUI 152 and EQUI 156, in pounds/day; STRU33L365CS = cumulative sum lead emissions emitted through STRU 33 from EQUI 152 and EQUI 156 for the first 365 days beginning on permit issuance date, in pounds/year;</p>

Requirement number	Requirement and citation
	EQUI152L = total lead stack emissions from EQUI 152, in pounds/day; and EQUI156L = total lead stack emissions from EQUI 156, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.108.12	Lead: Daily Calculations on the 366 th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 33 using the following equations: $STRU33L = EQUI152L + EQUI156L$ $STRU33L365RS = (STRU33L2 + STRU33L3 + STRU33L4 + + STRU33L364 + STRU33L365 + STRU33L366) - STRU33L1$ where: STRU33L# = total daily lead emissions emitted through STRU 33, in pounds/day; STRU33L365RS = 365-day rolling sum lead emissions emitted through STRU 33 for the previous 365-day period, in pounds/year; EQUI152L = total lead stack emissions from EQUI 152, in pounds/day; and EQUI156L = total lead stack emissions from EQUI 156, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.108.13	The Permittee is prohibited from releasing emissions of pollutants through STRU 33 from any emission units other than EQUI 152 or EQUI 156 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
STRU 34	Smog Hog #20 Stack
5.109.1	The Permittee must limit emissions of PM < 10 micron \leq 0.05749 pounds per hour daily average. [Minn. R. 7007.0080, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.109.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.05749 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.109.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 2.922 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.109.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.03400 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.109.5	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 34 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 34 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.109.6	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit:

Requirement number	Requirement and citation
	1) The total lead emissions from STRU 34 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 34, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 34, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum annual lead emissions from STRU 34, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual lead emissions from STRU 34, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.109.7	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 34 using the following equation: $\text{STRU34PM10} = \text{EQUI153PM10} + \text{EQUI154PM10}$ where: STRU34PM10 = total daily average PM10 emissions emitted through STRU 34, in pounds/hour; EQUI153PM10 = total daily average PM10 stack emissions from EQUI 153, in pounds/hour; and EQUI154PM10 = total daily average PM10 stack emissions from EQUI 154, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.109.8	PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions STRU 34 using the following equation: $\text{STRU34PM2.5} = \text{EQUI153PM2.5} + \text{EQUI154PM2.5}$ where: STRU34PM2.5 = total daily average PM2.5 emissions emitted through STRU 34, in pounds/hour; EQUI153PM2.5 = total daily average PM2.5 stack emissions from EQUI 153, in pounds/hour; and EQUI154PM2.5 = total daily average PM2.5 stack emissions from EQUI 154, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.109.9	Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum daily lead emissions from STRU 34 using the following equations: $\text{STRU34L} = \text{EQUI153L} + \text{EQUI154L}$ $\text{STRU34L3CS} = \text{STRU34L1} + \text{STRU34L2} + \text{STRU34L3} + \dots + \text{STRU34L90} + \text{STRU34L91} + \text{STRU34L92}$ where: STRU34L# = total daily lead emissions emitted through STRU 34 from EQUI 153 and EQUI 154, in pounds/day; STRU34L3CS = cumulative sum daily lead emissions emitted through STRU 34 from EQUI 153 and EQUI 154 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum;

Requirement number	Requirement and citation
	EQUI153L = total lead stack emissions from EQUI 153, in pounds/day; and EQUI154L = total lead stack emissions from EQUI 154, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.109.10	Lead: Daily Calculations on the 93 rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 34 using the following equations: $\text{STRU34L} = \text{EQUI153L} + \text{EQUI154L}$ $\text{STRU34L3A} = [(\text{STRU34L2} + \text{STRU34L3} + \text{STRU34L4} + \dots + \text{STRU34L91} + \text{STRU34L92} + \text{STRU34L93}) - \text{STRU34L1}] / 92 \text{ days}$ where: STRU34L# = total daily lead emissions emitted through STRU 34, in pounds/day; STRU34L3A = 92-day rolling average lead emissions emitted through STRU 34 for the previous 92-day period, in pounds/day; EQUI153L = total lead stack emissions from EQUI 153, in pounds/day; and EQUI154L = total lead stack emissions from EQUI 154, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.109.11	Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum annual lead emissions from STRU 34 using the following equations: $\text{STRU34L} = \text{EQUI153L} + \text{EQUI154L}$ $\text{STRU34L365CS} = \text{STRU34L2} + \text{STRU34L3} + \text{STRU34L4} + \dots + \text{STRU34L363} + \text{STRU34L364} + \text{STRU34L365}$ where: STRU34L# = daily lead emissions emitted through STRU 34 from EQUI 153 and EQUI 154, in pounds/day; STRU34L365CS = cumulative sum lead emissions emitted through STRU 34 from EQUI 153 and EQUI 154 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI153L = total lead stack emissions from EQUI 153, in pounds/day; and EQUI154L = total lead stack emissions from EQUI 154, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.109.12	Lead: Daily Calculations on the 366 th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 34 using the following equations: $\text{STRU34L} = \text{EQUI153L} + \text{EQUI154L}$ $\text{STRU34L365RS} = (\text{STRU34L2} + \text{STRU34L3} + \text{STRU34L4} + \dots + \text{STRU34L364} + \text{STRU34L365} + \text{STRU34L366}) - \text{STRU34L1}$ where: STRU34L# = total daily lead emissions emitted through STRU 34, in pounds/day; STRU34L365RS = 365-day rolling sum lead emissions emitted through STRU 34 for the previous 365-day period, in pounds/year; EQUI153L = total lead stack emissions from EQUI 153, in pounds/day; and EQUI154L = total lead stack emissions from EQUI 154, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]

Requirement number	Requirement and citation
5.109.13	The Permittee is prohibited from releasing emissions of pollutants through STRU 34 from any emission units other than EQUI 153 or EQUI 154 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 35	Smog Hog #21 Stack
5.110.1	The Permittee must limit emissions of PM < 10 micron \leq 0.01710 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.110.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.01710 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.110.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 0.9743 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.110.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.01059 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.110.5	Emission limit for the first 365 days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 0.9412 pounds per year 365-day sum. The cumulative amount must be calculated each operating day for the first 365 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. Stat. 116.07, subd. 4a(a)]
5.110.6	Emission limit effective 366 days from the date of permit issuance and thereafter. The Permittee shall limit emissions of Lead \leq 0.9412 pounds per year 365-day rolling sum. The 365-day rolling sum must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. Stat. 116.07, subd. 4a(a)]
5.110.7	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 35 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 35 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.110.8	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 35 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 35, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 35, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum annual lead emissions from STRU 35, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual

Requirement number	Requirement and citation
	lead emissions from STRU 35, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.110.9	<p>PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 35 using the following equation: $STRU35PM10 = EQUI117PM10 + EQUI160PM10$</p> <p>where:</p> <p>STRU35PM10 = total daily average PM10 emissions emitted through STRU 35, in pounds/hour; and EQUI117PM10 = total daily average PM10 stack emissions from EQUI 117, in pounds/hour; EQUI160PM10 = total daily average PM10 stack emissions from EQUI 160, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.110.10	<p>PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU35 using the following equation: $STRU35PM2.5 = EQUI117PM2.5 + EQUI160PM2.5$</p> <p>where:</p> <p>STRU35PM2.5 = total daily average PM2.5 emissions emitted through STRU 35, in pounds/hour; EQUI117PM2.5 = total daily average PM2.5 stack emissions from EQUI 117, in pounds/hour; and EQUI160PM2.5 = total daily average PM2.5 stack emissions from EQUI 160, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.110.11	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum daily lead emissions from STRU 35 using the following equations: $STRU35L = EQUI160L$ $STRU35L3CS = STRU35L1 + STRU35L2 + STRU35L3 + \dots + STRU35L90 + STRU35L91 + STRU35L92$</p> <p>where:</p> <p>STRU35L# = total daily lead emissions emitted through STRU 35 from EQUI 160, in pounds/day; STRU35L3CS = cumulative sum daily lead emissions emitted through STRU 35 from EQUI 160 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; and EQUI160L = total lead stack emissions from EQUI 160, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.110.12	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU35 the following equations: $STRU35L = EQUI160L$ $STRU35L3A = [(STRU35L2 + STRU35L3 + STRU35L4 + \dots + STRU35L91 + STRU35L92 + STRU35L93) - STRU35L1] / 92 \text{ days}$</p> <p>where:</p> <p>STRU35L# = total daily lead emissions emitted through STRU 35, in pounds/day; STRU35L3A = 92-day rolling average lead emissions emitted through STRU 35 for the previous 92-day</p>

Requirement number	Requirement and citation
	period, in pounds/day; and EQUI160L = total lead stack emissions from EQUI 160, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.110.13	Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum annual lead emissions from STRU 35 using the following equations: $STRU35L = EQUI160L$ $STRU35L365CS = STRU35L2 + STRU35L3 + STRU35L4 + \dots + STRU35L363 + STRU35L364 + STRU35L365$ where: $STRU35L\# =$ daily lead emissions emitted through STRU 35 from EQUI 160, in pounds/day; $STRU35L365CS =$ cumulative sum lead emissions emitted through STRU 35 from EQUI 160 for the first 365 days beginning on permit issuance date, in pounds/year; and EQUI160L = total lead stack emissions from EQUI 160, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.110.14	Lead: Daily Calculations on the 366 th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 35 using the following equations: $STRU35L = EQUI160L$ $STRU35L365RS = (STRU35L2 + STRU35L3 + STRU35L4 + \dots + STRU35L364 + STRU35L365 + STRU35L366) - STRU35L1$ where: $STRU35L\# =$ total daily lead emissions emitted through STRU 35, in pounds/day; $STRU35L365RS =$ 365-day rolling sum lead emissions emitted through STRU 35 for the previous 365-day period, in pounds/year; and EQUI160L = total lead stack emissions from EQUI 160, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.110.15	The Permittee is prohibited from releasing emissions of pollutants through STRU 35 from any emission units other than EQUI 117 or EQUI 160 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 41	Solvent Vapor Remediation System Stack
5.111.1	The Permittee shall limit emissions of 1,2-(trans-) Dichloroethylene ≤ 0.0010 pounds per hour 3-hour average. This emission rate represents uncontrolled emission rates used in modeling and AERA analysis. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.111.2	The Permittee shall limit emissions of Trichloroethylene (TCE) ≤ 0.00006 pounds per hour from EQUI 167. This emission rate represents uncontrolled emission rates used in modeling and AERA analysis. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a) & 9(2), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.111.3	The Permittee is prohibited from releasing emissions of pollutants through STRU 41 from any emission units other than EQUI 167 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as

Requirement number	Requirement and citation
	described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. (A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 43	Exhaust fan #7
5.112.1	The Permittee shall limit emissions of PM < 10 micron <= 0.01896 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.112.2	The Permittee shall limit emissions of PM < 2.5 micron <= 0.01896 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.112.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead <= 0.1305 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.112.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead <= 0.001418 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.112.5	The Permittee shall limit emissions of Nitrogen Oxides <= 0.1826 pounds per hour 1-hour average This is the emission rate used in modeling and it represents the contributions from EQUI 106 and 109. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.112.6	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 43 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 43 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.112.7	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 43 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum lead emissions from STRU 43, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 43, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum die casting lead emissions from STRU 43, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual die casting lead emissions from STRU 43, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.112.8	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 43 using the following equation: $\text{STRU43PM10} = \text{EQUI124FPM10} + 0.014 + 0.00021$

Requirement number	Requirement and citation
	<p>where:</p> <p>STRU43PM10 = total daily average PM10 emissions emitted through STRU 43, in pounds/hour; and EQUI124FPM10 = total daily average uncaptured PM10 emissions from EQUI 124, in pounds/hour 0.014 = total daily average PM10 emission contribution from EQUI 106 and EQUI 109, in pounds/hour; and 0.00021 = total daily average PM10 emission contribution from EQUI 115, in pounds/hr. [Minn. R. 7007.0800, subps. 4-5]</p>
5.112.9	<p>PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 43 using the following equation: $\text{STRU43PM2.5} = \text{EQUI124FPM2.5} + 0.014 + 0.00021$</p> <p>where:</p> <p>STRU43PM2.5 = total daily average PM2.5 emissions emitted through STRU 43, in pounds/hour; and EQUI124FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 124, in pounds/hour. 0.014 = total daily average PM2.5 emission contribution from EQUI 106 and EQUI 109, in pounds/hour; and 0.00021 = total daily average PM2.5 emission contribution from EQUI 115, in pounds/hr. [Minn. R. 7007.0800, subps. 4-5]</p>
5.112.10	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 43 using the following equations: $\text{STRU43L} = \text{EQUI124FL} + 0.00011$ $\text{STRU43L3CS} = \text{STRU43L1} + \text{STRU43L2} + \text{STRU43L3} + \dots + \text{STRU43L90} + \text{STRU43L91} + \text{STRU43L92}$</p> <p>where:</p> <p>STRU43L# = total daily lead emissions emitted through STRU 43, in pounds/day; STRU43L3CS = cumulative sum lead emissions emitted through STRU 43 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI124FL = total uncaptured lead emissions from EQUI 124, in pounds/day; and 0.00011 = lead emission contribution from EQUI 115, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.112.11	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 43 using the following equations: $\text{STRU43L} = \text{EQUI124FL} + 0.00011$ $\text{STRU43L3A} = [(\text{STRU43L2} + \text{STRU43L3} + \text{STRU43L4} + \dots + \text{STRU43L91} + \text{STRU43L92} + \text{STRU43L93}) - \text{STRU43L1}] / 92 \text{ days}$</p> <p>where:</p> <p>STRU43L# = total daily lead emissions emitted through STRU 43, in pounds/day; STRU43L3A = 92-day rolling average lead emissions emitted through STRU 43 for the previous 92-day period, in pounds/day; EQUI124FL = total uncaptured lead emissions from EQUI 124, in pounds/day; and 0.00011 = lead emission contribution from EQUI 115, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>

Requirement number	Requirement and citation
5.112.12	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum).</p> <p>The Permittee shall calculate the cumulative sum lead emissions from STRU 43 using the following equations: EQUI124FL = EQUI124FL STRU43L365CS = STRU43L1 + STRU43L2 + STRU43L3 + . . . + STRU43L363 + STRU43L364 + STRU43L365</p> <p>where:</p> <p>STRU43L# = total daily lead emissions emitted through STRU 43, in pounds/day; STRU43L365CS = cumulative sum lead emissions emitted through STRU 43 for the first 365 days beginning on permit issuance date, in pounds/year; and EQUI124FL = total uncaptured lead emissions from EQUI 124, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.112.13	<p>Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum).</p> <p>The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 43 using the following equations: EQUI124FL = EQUI124FL STRU43L365RS = (STRU43L2 + STRU43L3 + STRU43L4 + . . . + STRU43L364 + STRU43L365 + STRU43L366) - STRU43L1</p> <p>where:</p> <p>STRU43L# = total daily lead emissions emitted through STRU 43, in pounds/day; STRU43L365RS = 365-day rolling sum lead emissions emitted through STRU 43 for the previous 365-day period, in pounds/year; and EQUI124FL = total uncaptured lead emissions from EQUI 124, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.112.14	<p>The Permittee is prohibited from releasing emissions of pollutants through STRU 43 from any emission units other than EQUI 106, EQUI 109, EQUI 115, and EQUI 124 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 44	Exhaust fan #1
5.113.1	<p>The Permittee shall limit emissions of PM < 10 micron <= 0.07081 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.113.2	<p>The Permittee shall limit emissions of PM < 2.5 micron <= 0.07081 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.112.3	<p>Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead <= 0.1305 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.113.4	<p>Emission Limit Effective on the 93rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead <= 0.01061 pounds per day 92-day rolling average. The 92-day rolling average</p>

Requirement number	Requirement and citation
	must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.113.5	The Permittee shall limit emissions of Nitrogen Oxides \leq 0.4070 pounds per hour 1-hour average This is the emission rate used in modeling and it represents the contributions from EQUI 107, EQUI 108 and EQUI 111. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.113.6	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 44 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 44 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.113.7	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 44 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum lead emissions from STRU 44, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 44, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum die casting lead emissions from STRU 44, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual die casting lead emissions from STRU 44, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.113.8	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 44 using the following equation: $\text{STRU44PM10} = \text{EQUI130FPM10} + \text{EQUI131FPM10} + \text{EQUI132FPM10} + \text{EQUI133FPM10} + \text{EQUI134FPM10} + \text{EQUI135FPM10} + \text{EQUI136FPM10} + 0.03093$ where: STRU44PM10 = total daily average PM10 emissions emitted through STRU 44, in pounds/hour; EQUI130FPM10 = total daily average uncaptured PM10 emissions from EQUI 130, in pounds/hour; EQUI131FPM10 = total daily average uncaptured PM10 emissions from EQUI 131, in pounds/hour; EQUI132FPM10 = total daily average uncaptured PM10 emissions from EQUI 132, in pounds/hour; EQUI133FPM10 = total daily average uncaptured PM10 emissions from EQUI 133, in pounds/hour; EQUI134FPM10 = total daily average uncaptured PM10 emissions from EQUI 134, in pounds/hour; EQUI135FPM10 = total daily average uncaptured PM10 emissions from EQUI 135, in pounds/hour; EQUI136FPM10 = total daily average uncaptured PM10 emissions from EQUI 136, in pounds/hour; and 0.03093 = total daily average PM10 emission contribution from EQUI 107, EQUI 108 and EQUI 111, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.113.9	PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 44 using the following

Requirement number	Requirement and citation
	<p>equation: $\text{STRU44PM2.5} = \text{EQUI130FPM2.5} + \text{EQUI131FPM2.5} + \text{EQUI132FPM2.5} + \text{EQUI133FPM2.5} + \text{EQUI134FPM2.5} + \text{EQUI135FPM2.5} + \text{EQUI136FPM2.5} + 0.03093$</p> <p>where:</p> <p>STRU44PM2.5 = total daily average PM2.5 emissions emitted through STRU 44, in pounds/hour; EQUI130FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 130, in pounds/hour; EQUI131FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 131, in pounds/hour; EQUI132FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 132, in pounds/hour; EQUI133FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 133, in pounds/hour; EQUI134FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 134, in pounds/hour; EQUI135FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 135, in pounds/hour; EQUI136FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 136, in pounds/hour; and 0.03093 = total daily average PM2.5 emission contribution from EQUI 107, EQUI 108 and EQUI 111, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.113.10	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 44 using the following equations: $\text{STRU44L} = \text{EQUI130FL} + \text{EQUI131FL} + \text{EQUI132FL} + \text{EQUI133FL} + \text{EQUI134FL} + \text{EQUI135FL} + \text{EQUI136FL}$ $\text{STRU44L3CS} = \text{STRU44L1} + \text{STRU44L2} + \text{STRU44L3} + \dots + \text{STRU44L90} + \text{STRU44L91} + \text{STRU44L92}$</p> <p>where:</p> <p>STRU44L# = total daily lead emissions emitted through STRU 44, in pounds/day; STRU44L3CS = cumulative sum lead emissions emitted through STRU 44 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI130FL = total uncaptured lead emissions from EQUI 130, in pounds/day; EQUI131FL = total uncaptured lead emissions from EQUI 131, in pounds/day; EQUI132FL = total uncaptured lead emissions from EQUI 132, in pounds/day; EQUI133FL = total uncaptured lead emissions from EQUI 133, in pounds/day; EQUI134FL = total uncaptured lead emissions from EQUI 134, in pounds/day; EQUI135FL = total uncaptured lead emissions from EQUI 135, in pounds/day; and EQUI136FL = total uncaptured lead emissions from EQUI 136, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.113.11	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 44 using the following equations: $\text{STRU44L} = \text{EQUI130FL} + \text{EQUI131FL} + \text{EQUI132FL} + \text{EQUI133FL} + \text{EQUI134FL} + \text{EQUI135FL} + \text{EQUI136FL}$ $\text{STRU44L3A} = [(\text{STRU44L2} + \text{STRU44L3} + \text{STRU44L4} + \dots + \text{STRU44L91} + \text{STRU44L92} + \text{STRU44L93}) - \text{STRU44L1}] / 92 \text{ days}$</p> <p>where:</p> <p>STRU44L# = total daily lead emissions emitted through STRU 44, in pounds/day; STRU44L3A = 92-day rolling average lead emissions emitted through STRU 44 for the previous 92-day period, in pounds/day;</p>

Requirement number	Requirement and citation
	EQUI130FL = total uncaptured lead emissions from EQUI 130, in pounds/day; EQUI131FL = total uncaptured lead emissions from EQUI 131, in pounds/day; EQUI132FL = total uncaptured lead emissions from EQUI 132, in pounds/day; EQUI133FL = total uncaptured lead emissions from EQUI 133, in pounds/day; EQUI134FL = total uncaptured lead emissions from EQUI 134, in pounds/day; EQUI135FL = total uncaptured lead emissions from EQUI 135, in pounds/day; and EQUI136FL = total uncaptured lead emissions from EQUI 136, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.113.12	Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 44 using the following equations: $\text{STRU44L} = \text{EQUI130FL} + \text{EQUI131FL} + \text{EQUI132FL} + \text{EQUI133FL} + \text{EQUI134FL} + \text{EQUI135FL} + \text{EQUI136FL}$ $\text{STRU44L365CS} = \text{STRU44L1} + \text{STRU44L2} + \text{STRU44L3} + \dots + \text{STRU44L363} + \text{STRU44L364} + \text{STRU44L365}$ where: STRU44L# = total daily lead emissions emitted through STRU 44, in pounds/day; STRU44L365CS = cumulative sum lead emissions emitted through STRU 44 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI130FL = total uncaptured lead emissions from EQUI 130, in pounds/day; EQUI131FL = total uncaptured lead emissions from EQUI 131, in pounds/day; EQUI132FL = total uncaptured lead emissions from EQUI 132, in pounds/day; EQUI133FL = total uncaptured lead emissions from EQUI 133, in pounds/day; EQUI134FL = total uncaptured lead emissions from EQUI 134, in pounds/day; EQUI135FL = total uncaptured lead emissions from EQUI 135, in pounds/day; and EQUI136FL = total uncaptured lead emissions from EQUI 136, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.113.13	Lead: Daily Calculations on the 366 th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 44 using the following equations: $\text{STRU44L} = \text{EQUI130FL} + \text{EQUI131FL} + \text{EQUI132FL} + \text{EQUI133FL} + \text{EQUI134FL} + \text{EQUI135FL} + \text{EQUI136FL}$ $\text{STRU44L365RS} = (\text{STRU44L2} + \text{STRU44L3} + \text{STRU44L4} + \dots + \text{STRU44L364} + \text{STRU44L365} + \text{STRU44L366}) - \text{STRU44L1}$ where: STRU44L# = total daily lead emissions emitted through STRU 44, in pounds/day; STRU44L365RS = 365-day rolling sum lead emissions emitted through STRU 44 for the previous 365-day period, in pounds/year; EQUI130FL = total uncaptured lead emissions from EQUI 130, in pounds/day; EQUI131FL = total uncaptured lead emissions from EQUI 131, in pounds/day; EQUI132FL = total uncaptured lead emissions from EQUI 132, in pounds/day; EQUI133FL = total uncaptured lead emissions from EQUI 133, in pounds/day; EQUI134FL = total uncaptured lead emissions from EQUI 134, in pounds/day; EQUI135FL = total uncaptured lead emissions from EQUI 135, in pounds/day; and EQUI136FL = total uncaptured lead emissions from EQUI 136, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]

Requirement number	Requirement and citation
5.113.14	The Permittee is prohibited from releasing emissions of pollutants through STRU 44 from any emission units other than EQUI 107, EQUI 108, EQUI 111, EQUI 130, EQUI 131, EQUI 132, EQUI 133, EQUI 134, EQUI 135, or EQUI 136 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 45	Exhaust fan #2
5.114.1	The Permittee shall limit emissions of PM < 10 micron <= 0.05712 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.114.2	The Permittee shall limit emissions of PM < 2.5 micron <= 0.05712 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.114.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead <= 0.6423 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.114.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead <= 0.006982 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.114.5	The Permittee shall limit emissions of Nitrogen Oxides <= 0.4069 pounds per hour 1-hour average This is the emission rate used in modeling and it represents the contributions from EQUI 107, EQUI 108 and EQUI 111. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.114.6	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 45 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 45 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.114.7	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 45 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum lead emissions from STRU 45, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 45, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum die casting lead emissions from STRU 45, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual die casting lead emissions from STRU 45, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]

Requirement number	Requirement and citation
5.114.8	<p>PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 45 using the following equation: $\text{STRU45PM10} = \text{EQUI137FPM10} + \text{EQUI138FPM10} + \text{EQUI139FPM10} + \text{EQUI140FPM10} + \text{EQUI141FPM10} + 0.03093$</p> <p>where:</p> <p>STRU45PM10 = total daily average PM10 emissions emitted through STRU 45, in pounds/hour; EQUI137FPM10 = total daily average uncaptured PM10 emissions from EQUI 137, in pounds/hour; EQUI138FPM10 = total daily average uncaptured PM10 emissions from EQUI 138, in pounds/hour; EQUI139FPM10 = total daily average uncaptured PM10 emissions from EQUI 139, in pounds/hour; EQUI140FPM10 = total daily average uncaptured PM10 emissions from EQUI 140, in pounds/hour; EQUI141FPM10 = total daily average uncaptured PM10 emissions from EQUI 141, in pounds/hour; and 0.03093 = total daily average PM10 emission contribution from EQUI 107, EQUI 108 and EQUI 111, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.114.9	<p>PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 45 using the following equation: $\text{STRU45PM2.5} = \text{EQUI137FPM2.5} + \text{EQUI138FPM2.5} + \text{EQUI139FPM2.5} + \text{EQUI140FPM2.5} + \text{EQUI141FPM2.5} + 0.03093$</p> <p>where:</p> <p>STRU45PM2.5 = total daily average PM2.5 emissions emitted through STRU 45, in pounds/hour; EQUI137FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 137, in pounds/hour; EQUI138FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 138, in pounds/hour; EQUI139FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 139, in pounds/hour; EQUI140FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 140, in pounds/hour; EQUI141FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 141, in pounds/hour; and 0.03093 = total daily average PM2.5 emission contribution from EQUI 107, EQUI 108 and EQUI 111, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.114.10	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 45 using the following equations: $\text{STRU45L} = \text{EQUI137FL} + \text{EQUI138FL} + \text{EQUI139FL} + \text{EQUI140FL} + \text{EQUI141FL}$ $\text{STRU45L3CS} = \text{STRU45L1} + \text{STRU45L2} + \text{STRU45L3} + \dots + \text{STRU45L90} + \text{STRU45L91} + \text{STRU45L92}$</p> <p>where:</p> <p>STRU45L# = total daily lead emissions emitted through STRU 45, in pounds/day; STRU45L3CS = cumulative sum lead emissions emitted through STRU 45 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI137FL = total uncaptured lead emissions from EQUI 137, in pounds/day; EQUI138FL = total uncaptured lead emissions from EQUI 138, in pounds/day; EQUI139FL = total uncaptured lead emissions from EQUI 139, in pounds/day; EQUI140FL = total uncaptured lead emissions from EQUI 140, in pounds/day; and</p>

Requirement number	Requirement and citation
	EQUI141FL = total uncaptured lead emissions from EQUI 141, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.114.11	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average).</p> <p>The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 45 using the following equations:</p> $\text{STRU45L} = \text{EQUI137FL} + \text{EQUI138FL} + \text{EQUI139FL} + \text{EQUI140FL} + \text{EQUI141FL}$ $\text{STRU45L3A} = [(\text{STRU45L2} + \text{STRU45L3} + \text{STRU45L4} + \dots + \text{STRU45L91} + \text{STRU45L92} + \text{STRU45L93}) - \text{STRU45L1}] / 92 \text{ days}$ <p>where:</p> <p>STRU45L# = total daily lead emissions emitted through STRU 45, in pounds/day; STRU45L3A = 92-day rolling average lead emissions emitted through STRU 45 for the previous 92-day period, in pounds/day; EQUI137FL = total uncaptured lead emissions from EQUI 137, in pounds/day; EQUI138FL = total uncaptured lead emissions from EQUI 138, in pounds/day; EQUI139FL = total uncaptured lead emissions from EQUI 139, in pounds/day; EQUI140FL = total uncaptured lead emissions from EQUI 140, in pounds/day; and EQUI141FL = total uncaptured lead emissions from EQUI 141, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.114.12	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum).</p> <p>The Permittee shall calculate the cumulative sum lead emissions from STRU 45 using the following equations:</p> $\text{STRU45L} = \text{EQUI130FL} + \text{EQUI131FL} + \text{EQUI132FL} + \text{EQUI133FL} + \text{EQUI134FL} + \text{EQUI135FL} + \text{EQUI136FL}$ $\text{STRU45L365CS} = \text{STRU45L1} + \text{STRU45L2} + \text{STRU45L3} + \dots + \text{STRU45L363} + \text{STRU45L364} + \text{STRU45L365}$ <p>where:</p> <p>STRU45L# = total daily lead emissions emitted through STRU 45, in pounds/day; STRU45L365CS = cumulative sum lead emissions emitted through STRU 45 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI137FL = total uncaptured lead emissions from EQUI 137, in pounds/day; EQUI138FL = total uncaptured lead emissions from EQUI 138, in pounds/day; EQUI139FL = total uncaptured lead emissions from EQUI 139, in pounds/day; EQUI140FL = total uncaptured lead emissions from EQUI 140, in pounds/day; and EQUI141FL = total uncaptured lead emissions from EQUI 141, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.114.13	<p>Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum).</p> <p>The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 45 using the following equations:</p> $\text{STRU45L} = \text{EQUI137FL} + \text{EQUI138FL} + \text{EQUI139FL} + \text{EQUI140FL} + \text{EQUI141FL}$ $\text{STRU45L365RS} = (\text{STRU45L2} + \text{STRU45L3} + \text{STRU45L4} + \dots + \text{STRU45L364} + \text{STRU45L365} + \text{STRU45L366}) - \text{STRU45L1}$ <p>where:</p> <p>STRU45L# = total daily lead emissions emitted through STRU 45, in pounds /day;</p>

Requirement number	Requirement and citation
	<p>STRU45L365RS = 365-day rolling sum lead emissions emitted through STRU 45 for the previous 365-day period, in pounds/year; EQUI137FL = total uncaptured lead emissions from EQUI 137, in pounds/day; EQUI138FL = total uncaptured lead emissions from EQUI 138, in pounds/day; EQUI139FL = total uncaptured lead emissions from EQUI 139, in pounds/day; EQUI140FL = total uncaptured lead emissions from EQUI 140, in pounds/day; and EQUI141FL = total uncaptured lead emissions from EQUI 141, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.114.14	<p>The Permittee is prohibited from releasing emissions of pollutants through STRU 45 from any emission units other than EQUI 107, EQUI 108, EQUI 111, EQUI 137, EQUI 138, EQUI 139, EQUI 140 or EQUI 141 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 46	Exhaust fan #3
5.115.1	<p>The Permittee shall limit emissions of PM < 10 micron \leq 0.04535 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.115.2	<p>The Permittee shall limit emissions of PM < 2.5 micron \leq 0.04535 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.115.3	<p>Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 0.3559 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.115.4	<p>Emission Limit Effective on the 93rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.003868 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.115.5	<p>The Permittee shall limit emissions of Nitrogen Oxides \leq 0.4070 pounds per hour 1-hour average This is the emission rate used in modeling and it represents the contributions from EQUI 107, EQUI 108 and EQUI 111. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.115.6	<p>Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 46 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 46 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]</p>
5.115.7	<p>Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 46 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum lead emissions from STRU 46, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead</p>

Requirement number	Requirement and citation
	emissions from STRU 46, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum die casting lead emissions from STRU 46, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual die casting lead emissions from STRU 46, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.115.8	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 46 using the following equation: $\text{STRU46PM10} = \text{EQUI142FPM10} + \text{EQUI143FPM10} + \text{EQUI155FPM10} + 0.03093$ where: STRU46PM10 = total daily average PM10 emissions emitted through STRU 46, in pounds/hour; EQUI142FPM10 = total daily average uncaptured PM10 emissions from EQUI 142, in pounds/hour; EQUI143FPM10 = total daily average uncaptured PM10 emissions from EQUI 143, in pounds/hour; EQUI155FPM10 = total daily average uncaptured PM10 emissions from EQUI 155, in pounds/hour; and 0.03093 = total daily average PM10 emission contribution from EQUI 107, EQUI 108 and EQUI 111, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.115.9	PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 46 using the following equation: $\text{STRU46PM2.5} = \text{EQUI142FPM2.5} + \text{EQUI143FPM2.5} + \text{EQUI155FPM2.5} + 0.03093$ where: STRU46PM2.5 = total daily average PM2.5 emissions emitted through STRU 46, in pounds/hour; EQUI142FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 142, in pounds/hour; EQUI143FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 143, in pounds/hour; EQUI155FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 155, in pounds/hour; and 0.03093 = total daily average PM2.5 emission contribution from EQUI 107, EQUI 108 and EQUI 111, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.115.10	Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 46 using the following equations: $\text{STRU46L} = \text{EQUI142FL} + \text{EQUI143FL} + \text{EQUI155FL}$ $\text{STRU46L3CS} = \text{STRU46L1} + \text{STRU46L2} + \text{STRU46L3} + \dots + \text{STRU46L90} + \text{STRU46L91} + \text{STRU46L92}$ where: STRU46L# = total daily lead emissions emitted through STRU 46, in pounds/day; STRU46L3CS = cumulative sum lead emissions emitted through STRU 46 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI142FL = total uncaptured lead emissions from EQUI 142, in pounds/day;

Requirement number	Requirement and citation
	EQUI143FL = total uncaptured lead emissions from EQUI 143, in pounds/day; and EQUI155FL = total uncaptured lead emissions from EQUI 155, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.115.11	Lead: Daily Calculations on the 93 rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 46 using the following equations: $\text{STRU46L} = \text{EQUI142FL} + \text{EQUI143FL} + \text{EQUI155FL}$ $\text{STRU46L3A} = [(\text{STRU46L2} + \text{STRU46L3} + \text{STRU46L4} + \dots + \text{STRU46L91} + \text{STRU46L92} + \text{STRU46L93}) - \text{STRU46L1}] / 92 \text{ days}$ where: STRU46L# = total daily lead emissions emitted through STRU 46, in pounds/day; STRU46L3A = 92-day rolling average lead emissions emitted through STRU 46 for the previous 92-day period, in pounds/day; EQUI142FL = total uncaptured lead emissions from EQUI 142, in pounds/day; EQUI143FL = total uncaptured lead emissions from EQUI 143, in pounds/day; and EQUI155FL = total uncaptured lead emissions from EQUI 155, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.115.12	Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 46 using the following equations: $\text{STRU46L} = \text{EQUI142FL} + \text{EQUI143FL} + \text{EQUI155FL}$ $\text{STRU46L365CS} = \text{STRU46L1} + \text{STRU46L2} + \text{STRU46L3} + \dots + \text{STRU46L363} + \text{STRU46L364} + \text{STRU46L365}$ where: STRU46L# = total daily lead emissions emitted through STRU 46, in pounds/day; STRU46L365CS = cumulative sum lead emissions emitted through STRU 46 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI142FL = total uncaptured lead emissions from EQUI 142, in pounds/day; EQUI143FL = total uncaptured lead emissions from EQUI 143, in pounds/day; and EQUI155FL = total uncaptured lead emissions from EQUI 155, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.115.13	Lead: Daily Calculations on the 366 th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 46 using the following equations: $\text{STRU46L} = \text{EQUI142FL} + \text{EQUI143FL} + \text{EQUI155FL}$ $\text{STRU46L365RS} = (\text{STRU46L2} + \text{STRU46L3} + \text{STRU46L4} + \dots + \text{STRU46L364} + \text{STRU46L365} + \text{STRU46L366}) - \text{STRU46L1}$ where: STRU46L# = total daily lead emissions emitted through STRU 46, in pounds/day; STRU46L365RS = 365-day rolling sum lead emissions emitted through STRU 46 for the previous 365-day period, in pounds/year; EQUI142FL = total uncaptured lead emissions from EQUI 142, in pounds/day;

Requirement number	Requirement and citation
	EQUI143FL = total uncaptured lead emissions from EQUI 143, in pounds/day; and EQUI155FL = total uncaptured lead emissions from EQUI 155, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.115.14	The Permittee is prohibited from releasing emissions of pollutants through STRU 46 from any emission units other than EQUI 107, EQUI 108, EQUI 111, EQUI 142, EQUI 143, or EQUI 155 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 47	Exhaust fan #4
5.116.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.02241 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.116.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.02241 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.116.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 0.3559 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.116.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.001958 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.116.5	The Permittee shall limit emissions of Nitrogen Oxides \leq 0.1987 pounds per hour 1-hour average This is the emission rate used in modeling and it represents the contributions from EQUI 106 and EQUI 108. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.116.6	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 47 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 47 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.116.7	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 47 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum lead emissions from STRU 47, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 47, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum die casting lead emissions from STRU 47, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual die

Requirement number	Requirement and citation
	casting lead emissions from STRU 47, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.116.8	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 47 using the following equation: $\text{STRU47PM10} = \text{EQUI127FPM10} + \text{EQUI128FPM10} + \text{EQUI129FPM10} + 0.01510$ where: STRU47PM10 = total daily average PM10 emissions emitted through STRU 47, in pounds/hour; EQUI127FPM10 = total daily average uncaptured PM10 emissions from EQUI 127, in pounds/hour; EQUI128FPM10 = total daily average uncaptured PM10 emissions from EQUI 128, in pounds/hour; EQUI129FPM10 = total daily average uncaptured PM10 emissions from EQUI 129, in pounds/hour; and 0.01510 = total daily average PM10 emission contribution from EQUI 106 and EQUI 108, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.116.9	PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 47 using the following equation: $\text{STRU47PM2.5} = \text{EQUI127FPM2.5} + \text{EQUI128FPM2.5} + \text{EQUI129FPM2.5} + 0.01510$ where: STRU47PM2.5 = total daily average PM2.5 emissions emitted through STRU 47, in pounds/hour; EQUI127FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 127, in pounds/hour; EQUI128FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 128, in pounds/hour; EQUI129FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 129, in pounds/hour; and 0.01510 = total daily average PM2.5 emission contribution from EQUI 106 and EQUI 108, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.116.10	Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 47 using the following equations: $\text{STRU47L} = \text{EQUI127FL} + \text{EQUI128FL} + \text{EQUI129FL}$ $\text{STRU47L3CS} = \text{STRU47L1} + \text{STRU47L2} + \text{STRU47L3} + \dots + \text{STRU47L90} + \text{STRU47L91} + \text{STRU47L92}$ where: STRU47L# = total daily lead emissions emitted through STRU 47, in pounds/day; STRU47L3CS = cumulative sum lead emissions emitted through STRU 47 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI127FL = total uncaptured lead emissions from EQUI 127, in pounds/day; EQUI128FL = total uncaptured lead emissions from EQUI 128, in pounds/day; and EQUI129FL = total uncaptured lead emissions from EQUI 129, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.116.11	Lead: Daily Calculations on the 93 rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 47 using the

Requirement number	Requirement and citation
	following equations: $\text{STRU47L} = \text{EQUI127FL} + \text{EQUI128FL} + \text{EQUI129FL}$ $\text{STRU47L3A} = [(\text{STRU47L2} + \text{STRU47L3} + \text{STRU47L4} + \dots + \text{STRU47L91} + \text{STRU47L92} + \text{STRU47L93}) - \text{STRU47L1}] / 92 \text{ days}$ where: STRU47L# = total daily lead emissions emitted through STRU 47, in pounds/day; STRU47L3A = 92-day rolling average lead emissions emitted through STRU 47 for the previous 92-day period, in pounds/day; EQUI127FL = total uncaptured lead emissions from EQUI 127, in pounds/day; EQUI128FL = total uncaptured lead emissions from EQUI 128, in pounds/day; and EQUI129FL = total uncaptured lead emissions from EQUI 129, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.116.12	Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 47 using the following equations: $\text{STRU47L} = \text{EQUI127FL} + \text{EQUI128FL} + \text{EQUI129FL}$ $\text{STRU47L365CS} = \text{STRU47L1} + \text{STRU47L2} + \text{STRU47L3} + \dots + \text{STRU47L363} + \text{STRU47L364} + \text{STRU47L365}$ where: STRU47L# = total daily lead emissions emitted through STRU 47, in pounds/day; STRU47L365CS = cumulative sum lead emissions emitted through STRU 47 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI127FL = total uncaptured lead emissions from EQUI 127, in pounds/day; EQUI128FL = total uncaptured lead emissions from EQUI 128, in pounds/day; and EQUI129FL = total uncaptured lead emissions from EQUI 129, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.116.13	Lead: Daily Calculations on the 366 th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 47 using the following equations: $\text{STRU47L} = \text{EQUI127FL} + \text{EQUI128FL} + \text{EQUI129FL}$ $\text{STRU47L365RS} = (\text{STRU47L2} + \text{STRU47L3} + \text{STRU47L4} + \dots + \text{STRU47L364} + \text{STRU47L365} + \text{STRU47L366}) - \text{STRU47L1}$ where: STRU47L# = total daily lead emissions emitted through STRU 47, in pounds/day; STRU47L365RS = 365-day rolling sum lead emissions emitted through STRU 47 for the previous 365-day period, in pounds/year; EQUI127FL = total uncaptured lead emissions from EQUI 127, in pounds/day; EQUI128FL = total uncaptured lead emissions from EQUI 128, in pounds/day; and EQUI129FL = total uncaptured lead emissions from EQUI 129, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.116.14	The Permittee is prohibited from releasing emissions of pollutants through STRU 47 from any emission unit other than EQUI 106, EQUI 108, EQUI 127, EQUI 128, or EQUI 129 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods

Requirement number	Requirement and citation
	based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 48	Exhaust fan #5
5.117.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.02520 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.117.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.02520 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.117.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 0.2778 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.117.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.003020 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.117.5	The Permittee shall limit emissions of Nitrogen Oxides \leq 0.1826 pounds per hour 1-hour average This is the emission rate used in modeling and it represents the contributions from EQUI 106 and EQUI 109. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.117.6	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 48 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 48 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.117.7	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 48 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum lead emissions from STRU 48, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 48, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum die casting lead emissions from STRU 48, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual die casting lead emissions from STRU 48, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.117.8	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 48 using the following equation:

Requirement number	Requirement and citation
	<p>STRU48PM10 = EQUI121FPM10 + EQUI122FPM10 + 0.01338</p> <p>where:</p> <p>STRU48PM10 = total daily average PM10 emissions emitted through STRU 48, in pounds/hour; EQUI121FPM10 = total daily average uncaptured PM10 emissions from EQUI 121, in pounds/hour; EQUI122FPM10 = total daily average uncaptured PM10 emissions from EQUI 122, in pounds/hour; and 0.01338 = total daily average PM10 emission contribution from EQUI 106 and EQUI 109, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.117.9	<p>PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 48 using the following equation: STRU48PM2.5 = EQUI121FPM2.5 + EQUI122FPM2.5 + 0.01338</p> <p>where:</p> <p>STRU48PM2.5 = total daily average PM2.5 emissions emitted through STRU 48, in pounds/hour; EQUI121FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 121, in pounds/hour; EQUI122FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 122, in pounds/hour; and 0.01338 = total daily average PM2.5 emission contribution from EQUI 106 and EQUI 109, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.117.10	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 48 using the following equations: STRU48L = EQUI121FL + EQUI122FL STRU48L3CS = STRU48L1 + STRU48L2 + STRU48L3 + . . . + STRU48L90 + STRU48L91 + STRU48L92</p> <p>where:</p> <p>STRU48L# = total daily lead emissions emitted through STRU 48, in pounds/day; STRU48L3CS = cumulative sum lead emissions emitted through STRU 48 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI121FL = total uncaptured lead emissions from EQUI 121, in pounds/day; and EQUI122FL = total uncaptured lead emissions from EQUI 122, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.117.11	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 48 using the following equations: STRU48L = EQUI121FL + EQUI122FL STRU48L3A = [(STRU48L2 + STRU48L3 + STRU48L4 + ... + STRU48L91 + STRU48L92 + STRU48L93) - STRU48L1] / 92 days</p> <p>where:</p> <p>STRU48L# = total daily lead emissions emitted through STRU 48, in pounds/day; STRU48L3A = 92-day rolling average lead emissions emitted through STRU 48 for the previous 92-day</p>

Requirement number	Requirement and citation
	period, in pounds/day; EQUI121FL = total uncaptured lead emissions from EQUI 121, in pounds/day; and EQUI122FL = total uncaptured lead emissions from EQUI 122, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.117.12	Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 48 using the following equations: $STRU48L = EQUI121FL + EQUI122FL$ $STRU48L365CS = STRU48L1 + STRU48L2 + STRU48L3 + \dots + STRU48L363 + STRU48L364 + STRU48L365$ where: STRU48L# = total daily lead emissions emitted through STRU 48, in pounds/day; STRU48L365CS = cumulative sum lead emissions emitted through STRU 48 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI121FL = total uncaptured lead emissions from EQUI 121, in pounds/day; and EQUI122FL = total uncaptured lead emissions from EQUI 122, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.117.13	Lead: Daily Calculations on the 366 th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 48 using the following equations: $STRU48L = EQUI121FL + EQUI122FL$ $STRU48L365RS = (STRU48L2 + STRU48L3 + STRU48L4 + \dots + STRU48L364 + STRU48L365 + STRU48L366) - STRU48L1$ where: STRU48L# = total daily lead emissions emitted through STRU 48, in pounds/day; STRU48L365RS = 365-day rolling sum lead emissions emitted through STRU 48 for the previous 365-day period, in pounds/year; EQUI121FL = total uncaptured lead emissions from EQUI 121, in pounds/day; and EQUI122FL = total uncaptured lead emissions from EQUI 122, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.117.14	The Permittee is prohibited from releasing emissions of pollutants through STRU 48 from any emission units other than EQUI 106, EQUI 109, EQUI 121 or EQUI 122 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 49	Exhaust fan #6
5.118.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.01779 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.118.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.01779 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.118.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead ≤ 0.2778 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.118.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead ≤ 0.001057 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.118.5	The Permittee shall limit emissions of Nitrogen Oxides ≤ 0.1823 pounds per hour 1-hour average This is the emission rate used in modeling and it represents the contributions from EQUI 106 and EQUI 109. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.118.6	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 49 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 49 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.118.7	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 49 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum lead emissions from STRU 49, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 49, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum die casting lead emissions from STRU 49, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual die casting lead emissions from STRU 49, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.118.8	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 49 using the following equation: $\text{STRU49PM10} = \text{EQUI123FPM10} + 0.01338$ where: STRU49PM10 = total daily average PM10 emissions emitted through STRU 49, in pounds/hour; EQUI123FPM10 = total daily average uncaptured PM10 emissions from EQUI 123, in pounds/hour; and 0.01338 = total daily average PM10 emission contribution from EQUI 106 and EQUI 109, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.118.9	PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 49 using the following

Requirement number	Requirement and citation
	equation: $\text{STRU49PM2.5} = \text{EQUI123FPM2.5} + 0.01338$ where: STRU49PM2.5 = total daily average PM2.5 emissions emitted through STRU 49, in pounds/hour; EQUI123FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 123, in pounds/hour; and 0.01338 = total daily average PM2.5 emission contribution from EQUI 106 and EQUI 109, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.118.10	Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 49 using the following equations: $\text{STRU49L} = \text{EQUI123FL}$ $\text{STRU49L3CS} = \text{STRU49L1} + \text{STRU49L2} + \text{STRU49L3} + \dots + \text{STRU49L90} + \text{STRU49L91} + \text{STRU49L92}$ where: STRU49L# = total daily lead emissions emitted through STRU 49, in pounds/day; STRU49L3CS = cumulative sum lead emissions emitted through STRU 49 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; and EQUI123FL = total uncaptured lead emissions from EQUI 123, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.118.11	Lead: Daily Calculations on the 93 rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 49 using the following equations: $\text{STRU49L} = \text{EQUI123FL}$ $\text{STRU49L3A} = [(\text{STRU49L2} + \text{STRU49L3} + \text{STRU49L4} + \dots + \text{STRU49L91} + \text{STRU49L92} + \text{STRU49L93}) - \text{STRU49L1}] / 92 \text{ days}$ where: STRU49L# = total daily lead emissions emitted through STRU 49, in pounds/day; STRU49L3A = 92-day rolling average lead emissions emitted through STRU 49 for the previous 92-day period, in pounds/day; and EQUI123FL = total uncaptured lead emissions from EQUI 123, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.118.12	Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 49 using the following equations: $\text{STRU49L} = \text{EQUI123FL}$ $\text{STRU49L365CS} = \text{STRU49L1} + \text{STRU49L2} + \text{STRU49L3} + \dots + \text{STRU49L363} + \text{STRU49L364} + \text{STRU49L365}$ where: STRU49L# = total daily lead emissions emitted through STRU 49, in pounds/day; STRU49L365CS = cumulative sum lead emissions emitted through STRU 49 for the first 365 days

Requirement number	Requirement and citation
	beginning on permit issuance date, in pounds/year; and EQUI123FL = total uncaptured lead emissions from EQUI 123, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.118.13	Lead: Daily Calculations on the 366 th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 49 using the following equations: STRU49L = EQUI123FL STRU49L365RS = (STRU49L2 + STRU49L3 + STRU49L4 +...+ STRU49L364 + STRU49L365 + STRU49L366) - STRU49L1 where: STRU49L# = total daily lead emissions emitted through STRU 49, in pounds/day; STRU49L365RS = 365-day rolling sum lead emissions emitted through STRU 49 for the previous 365-day period, in pounds/year; and EQUI123FL = total uncaptured lead emissions from EQUI 123, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.118.14	The Permittee is prohibited from releasing emissions of pollutants through STRU 49 from any emission units other than EQUI 106, EQUI 109 or EQUI 123 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 50	Exhaust fan #8
5.119.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.01688 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.119.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.01688 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.119.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 0.1925 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.119.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.002092 pounds per day 92-day rolling average. The 92-day average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.119.5	The Permittee shall limit emissions of Nitrogen Oxides \leq 0.1213 pounds per hour 1-hour average This is the emission rate used in modeling and it represents the contributions from EQUI 109. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.119.6	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 50 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 50 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]

Requirement number	Requirement and citation
5.119.7	<p>Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit:</p> <p>1) The total lead emissions from STRU 50 the previous operating day using formulas specified in this permit;</p> <p>2) For the first 92 days beginning on permit issuance date, the cumulative sum lead emissions from STRU 50, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit;</p> <p>3) On the 93rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 50, in pounds per day, for the previous 92-day period using formulas specified in this permit;</p> <p>4) For the first 365 days beginning on permit issuance date, the cumulative sum die casting lead emissions from STRU 50, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and</p> <p>5) On the 366th day following permit issuance and daily thereafter, the 365-day rolling sum annual die casting lead emissions from STRU 50, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]</p>
5.119.8	<p>PM < 10 micron: Daily Calculations.</p> <p>The Permittee shall calculate the average daily PM10 emissions from STRU 50 using the following equation:</p> $\text{STRU50PM10} = \text{EQUI125FPM10} + \text{EQUI126FPM10} + 0.00922 + 0.00021$ <p>where:</p> <p>STRU50PM10 = total daily average PM10 emissions emitted through STRU 50, in pounds/hour; EQUI125FPM10 = total daily average uncaptured PM10 emissions from EQUI 125, in pounds/hour; EQUI126FPM10 = total daily average uncaptured PM10 emissions from EQUI 126, in pounds/hour; 0.00922 = total daily average PM10 emission contribution from EQUI 109, in pounds/hour; and 0.00021 = PM10 emission contribution from EQUI115, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.119.9	<p>PM < 2.5 micron: Daily Calculations.</p> <p>The Permittee shall calculate the average daily PM2.5 emissions from STRU 50 using the following equation:</p> $\text{STRU50PM2.5} = \text{EQUI125FPM2.5} + \text{EQUI126FPM2.5} + 0.00922 + 0.00021$ <p>where:</p> <p>STRU50PM2.5 = total daily average PM2.5 emissions emitted through STRU 50, in pounds/hour; EQUI125FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 125, in pounds/hour; EQUI126FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 126, in pounds/hour; 0.00922 = total daily average PM2.5 emission contribution from EQUI 109, in pounds/hour; and 0.00021 = PM2.5 emission contribution from EQUI115, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.119.10	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum).</p> <p>The Permittee shall calculate the cumulative sum lead emissions from STRU 50 using the following equations:</p> $\text{STRU50L} = \text{EQUI125FL} + \text{EQUI126FL} + 0.000106$ $\text{STRU50L3CS} = \text{STRU50L1} + \text{STRU50L2} + \text{STRU50L3} + \dots + \text{STRU50L90} + \text{STRU50L91} + \text{STRU50L92}$

Requirement number	Requirement and citation
	<p>where:</p> <p>STRU50L# = total daily lead emissions emitted through STRU 50, in pounds/day; STRU50L3CS = cumulative sum lead emissions emitted through STRU 50 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI125FL = total uncaptured lead emissions from EQUI 125, in pounds/day; EQUI126FL = total uncaptured lead emissions from EQUI 126, in pounds/day; and 0.000106 = lead emission contribution from EQUI115, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.119.11	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 50 using the following equations: $\text{STRU50L} = \text{EQUI125FL} + \text{EQUI126FL} + 0.000106$ $\text{STRU50L3A} = [(\text{STRU50L2} + \text{STRU50L3} + \text{STRU50L4} + \dots + \text{STRU50L91} + \text{STRU50L92} + \text{STRU50L93}) - \text{STRU50L1}] / 92 \text{ days}$</p> <p>where:</p> <p>STRU50L# = total daily lead emissions emitted through STRU 50, in pounds/day; STRU50L3A = 92-day rolling average lead emissions emitted through STRU 50 for the previous 92-day period, in pounds/day; EQUI125FL = total uncaptured lead emissions from EQUI 125, in pounds/day; EQUI126FL = total uncaptured lead emissions from EQUI 126, in pounds/day; and 0.000106 = lead emission contribution from EQUI115, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.119.12	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 50 using the following equations: $\text{STRU50L} = \text{EQUI125FL} + \text{EQUI126FL}$ $\text{STRU50L365CS} = \text{STRU50L1} + \text{STRU50L2} + \text{STRU50L3} + \dots + \text{STRU50L363} + \text{STRU50L364} + \text{STRU50L365}$</p> <p>where:</p> <p>STRU50L# = total daily lead emissions emitted through STRU 50, in pounds/day; STRU50L365CS = cumulative sum lead emissions emitted through STRU 50 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI125FL = total uncaptured lead emissions from EQUI 125, in pounds/day; and EQUI126FL = total uncaptured lead emissions from EQUI 126, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.119.13	<p>Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 50 using the following equations: $\text{STRU50L} = \text{EQUI125FL} + \text{EQUI126FL}$ $\text{STRU50L365RS} = (\text{STRU50L2} + \text{STRU50L3} + \text{STRU50L4} + \dots + \text{STRU50L364} + \text{STRU50L365} + \text{STRU50L366}) - \text{STRU50L1}$</p>

Requirement number	Requirement and citation
	where: STRU50L# = total daily lead emissions emitted through STRU 50, in pounds/day; STRU50L365RS = 365-day rolling sum lead emissions emitted through STRU 50 for the previous 365-day period, in pounds/year; EQUI125FL = total uncaptured lead emissions from EQUI 125, in pounds/day; and EQUI126FL = total uncaptured lead emissions from EQUI 126, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.119.14	The Permittee is prohibited from releasing emissions of pollutants through STRU 50 from any emission units other than EQUI 109, EQUI 115, EQUI 116, EQUI 125, EQUI 126, or EQUI 233 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 51	Exhaust fan #9
5.120.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.05654 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.120.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.05654 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.120.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 0.9255 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.120.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.01006 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.120.5	The Permittee shall limit emissions of Nitrogen Oxides \leq 0.2453 pounds per hour 1-hour average This is the emission rate used in modeling and it represents the contributions from EQUI 110 and EQUI112. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.120.6	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 51 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 51 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.120.7	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 51 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum lead emissions from STRU 51, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 51, in pounds per day, for the previous 92-day period using formulas specified in this permit;

Requirement number	Requirement and citation
	4) For the first 365 days beginning on permit issuance date, the cumulative sum die casting lead emissions from STRU 51, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual die casting lead emissions from STRU 51, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.120.8	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 51 using the following equation: $\text{STRU51PM10} = \text{EQUI149FPM10} + \text{EQUI152FPM10} + \text{EQUI154FPM10} + \text{EQUI156FPM10} + 0.01864$ where: STRU51PM10 = total daily average PM10 emissions emitted through STRU 51, in pounds/hour; EQUI149FPM10 = total daily average uncaptured PM10 emissions from EQUI 149, in pounds/hour; EQUI152FPM10 = total daily average uncaptured PM10 emissions from EQUI 152, in pounds/hour; EQUI154FPM10 = total daily average uncaptured PM10 emissions from EQUI 154, in pounds/hour; EQUI156FPM10 = total daily average uncaptured PM10 emissions from EQUI 156, in pounds/hour; and 0.01864 = total daily average PM10 emission contribution from EQUI 110 and 112, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.120.9	PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 51 using the following equation: $\text{STRU51PM2.5} = \text{EQUI149FPM2.5} + \text{EQUI152FPM2.5} + \text{EQUI154FPM2.5} + \text{EQUI156FPM2.5} + 0.01864$ where: STRU51PM2.5 = total daily average PM2.5 emissions emitted through STRU 51, in pounds/hour; EQUI149FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 149, in pounds/hour; EQUI152FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 152, in pounds/hour; EQUI154FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 154, in pounds/hour; EQUI156FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 156, in pounds/hour; and 0.01864 = total daily average PM2.5 emission contribution from EQUI 110 and 112, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.120.10	Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 51 using the following equations: $\text{STRU51L} = \text{EQUI149FL} + \text{EQUI152FL} + \text{EQUI154FL} + \text{EQUI156FL}$ $\text{STRU51L3CS} = \text{STRU51L1} + \text{STRU51L2} + \text{STRU51L3} + \dots + \text{STRU51L90} + \text{STRU51L91} + \text{STRU51L92}$ where: STRU51L# = total daily lead emissions emitted through STRU 51, in pounds/day; STRU51L3CS = cumulative sum lead emissions emitted through STRU 51 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI149FL = total uncaptured lead emissions from EQUI 149, in pounds/day;

Requirement number	Requirement and citation
	EQUI152FL = total uncaptured lead emissions from EQUI 152, in pounds/day; EQUI154FL = total uncaptured lead emissions from EQUI 154, in pounds/day; and EQUI156FL = total uncaptured lead emissions from EQUI 156, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.120.11	Lead: Daily Calculations on the 93 rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 51 using the following equations: $\text{STRU51L} = \text{EQUI149FL} + \text{EQUI152FL} + \text{EQUI154FL} + \text{EQUI156FL}$ $\text{STRU51L3A} = [(\text{STRU51L2} + \text{STRU51L3} + \text{STRU51L4} + \dots + \text{STRU51L91} + \text{STRU51L92} + \text{STRU51L93}) - \text{STRU51L1}] / 92 \text{ days}$ where: STRU51L# = total daily lead emissions emitted through STRU 51, in pounds/day; STRU51L3A = 92-day rolling average lead emissions emitted through STRU 51 for the previous 92-day period, in pounds/day; EQUI149FL = total uncaptured lead emissions from EQUI 149, in pounds/day; EQUI152FL = total uncaptured lead emissions from EQUI 152, in pounds/day; EQUI154FL = total uncaptured lead emissions from EQUI 154, in pounds/day; and EQUI156FL = total uncaptured lead emissions from EQUI 156, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.120.12	Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 51 using the following equations: $\text{STRU51L} = \text{EQUI149FL} + \text{EQUI152FL} + \text{EQUI154FL} + \text{EQUI156FL}$ $\text{STRU51L365CS} = \text{STRU51L1} + \text{STRU51L2} + \text{STRU51L3} + \dots + \text{STRU51L363} + \text{STRU51L364} + \text{STRU51L365}$ where: STRU51L# = total daily lead emissions emitted through STRU 51, in pounds/day; STRU51L365CS = cumulative sum lead emissions emitted through STRU 51 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI149FL = total uncaptured lead emissions from EQUI 149, in pounds/day; EQUI152FL = total uncaptured lead emissions from EQUI 152, in pounds/day; EQUI154FL = total uncaptured lead emissions from EQUI 154, in pounds/day; and EQUI156FL = total uncaptured lead emissions from EQUI 156, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.120.13	Lead: Daily Calculations on the 366 th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 51 using the following equations: $\text{STRU51L} = \text{EQUI149FL} + \text{EQUI152FL} + \text{EQUI154FL} + \text{EQUI156FL}$ $\text{STRU51L365RS} = (\text{STRU51L2} + \text{STRU51L3} + \text{STRU51L4} + \dots + \text{STRU51L364} + \text{STRU51L365} + \text{STRU51L366}) - \text{STRU51L1}$ where: STRU51L# = total daily lead emissions emitted through STRU 51, in pounds/day;

Requirement number	Requirement and citation
	STRU51L365RS = 365-day rolling sum lead emissions emitted through STRU 51 for the previous 365-day period, in pounds/year; EQUI149FL = total uncaptured lead emissions from EQUI 149, in pounds/day; EQUI152FL = total uncaptured lead emissions from EQUI 152, in pounds/day; EQUI154FL = total uncaptured lead emissions from EQUI 154, in pounds/day; and EQUI156FL = total uncaptured lead emissions from EQUI 156, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.120.14	The Permittee is prohibited from releasing emissions of pollutants through STRU 51 from any emission units other than EQUI 110, EQUI 112, EQUI 149, EQUI 152, EQUI 154, or EQUI 156 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 52	Exhaust fan #10
5.121.1	The Permittee shall limit emissions of PM < 10 micron <= 0.04234 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.121.2	The Permittee shall limit emissions of PM < 2.5 micron <= 0.04234 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.121.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead <= 0.9255 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.121.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead <= 0.006304 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.121.5	The Permittee shall limit emissions of Nitrogen Oxides <= 0.2453 pounds per hour 1-hour average This is the emission rate used in modeling and it represents the contributions from EQUI 110 and EQUI 112. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.121.6	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 52 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 52 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.121.7	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 52 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum lead emissions from STRU 52, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 52, in pounds per day, for the previous 92-day period using formulas specified in this permit;

Requirement number	Requirement and citation
	4) For the first 365 days beginning on permit issuance date, the cumulative sum die casting lead emissions from STRU 52, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual die casting lead emissions from STRU 52, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.121.8	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 52 using the following equation: $\text{STRU52PM10} = \text{EQUI147FPM10} + \text{EQUI158FPM10} + 0.01864$ where: STRU52PM10 = total daily average PM10 emissions emitted through STRU 52, in pounds/hour; EQUI147FPM10 = total daily average uncaptured PM10 emissions from EQUI 147, in pounds/hour; EQUI158FPM10 = total daily average uncaptured PM10 emissions from EQUI 158, in pounds/hour; and 0.01864 = total daily average PM10 emission contribution from EQUI 110 and EQUI 112, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.121.	PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 52 using the following equation: $\text{STRU52PM2.5} = \text{EQUI147FPM2.5} + \text{EQUI158FPM2.5} + 0.01864$ where: STRU52PM2.5 = total daily average PM2.5 emissions emitted through STRU 52, in pounds/hour; EQUI147FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 147, in pounds/hour; and EQUI158FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 158, in pounds/hour; and 0.01864 = total daily average PM2.5 emission contribution from EQUI 110 and EQUI 112, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.121.10	Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 52 using the following equations: $\text{STRU52L} = \text{EQUI147FL} + \text{EQUI158FL}$ $\text{STRU52L3CS} = \text{STRU52L1} + \text{STRU52L2} + \text{STRU52L3} + \dots + \text{STRU52L90} + \text{STRU52L91} + \text{STRU52L92}$ where: STRU52L# = total daily lead emissions emitted through STRU 52, in pounds/day; STRU52L3CS = cumulative sum lead emissions emitted through STRU 52 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI147FL = total uncaptured lead emissions from EQUI 147, in pounds/day; and EQUI158FL = total uncaptured lead emissions from EQUI 158, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]

Requirement number	Requirement and citation
5.121.11	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average).</p> <p>The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 52 using the following equations: STRU52L = EQUI147FL + EQUI158FL STRU52L3A = [(STRU52L2 + STRU52L3 + STRU52L4 +...+ STRU52L91 + STRU52L92 + STRU52L93) - STRU52L1] / 92 days</p> <p>where:</p> <p>STRU52L# = total daily lead emissions emitted through STRU 52, in pounds/day; STRU52L3A = 92-day rolling average lead emissions emitted through STRU 52 for the previous 92-day period, in pounds/day; EQUI147FL = total uncaptured lead emissions from EQUI 147, in pounds/day; and EQUI158FL = total uncaptured lead emissions from EQUI 158, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.121.12	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum).</p> <p>The Permittee shall calculate the cumulative sum lead emissions from STRU 52 using the following equations: STRU52L = EQUI147FL + EQUI158FL STRU52L365CS = STRU52L1 + STRU52L2 + STRU52L3 + . . . + STRU52L363 + STRU52L364 + STRU52L365</p> <p>where:</p> <p>STRU52L# = total daily lead emissions emitted through STRU 52, in pounds/day; STRU52L365CS = cumulative sum lead emissions emitted through STRU 52 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI147FL = total uncaptured lead emissions from EQUI 147, in pounds/day; and EQUI158FL = total uncaptured lead emissions from EQUI 158, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.121.13	<p>Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum).</p> <p>The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 52 using the following equations: STRU52L = EQUI147FL + EQUI158FL STRU52L365RS = (STRU52L2 + STRU52L3 + STRU52L4 +...+ STRU52L364 + STRU52L365 + STRU52L366) - STRU52L1</p> <p>where:</p> <p>STRU52L# = total daily lead emissions emitted through STRU 52, in pounds/day; STRU52L365RS = 365-day rolling sum lead emissions emitted through STRU 52 for the previous 365-day period, in pounds/year; EQUI147FL = total uncaptured lead emissions from EQUI 147, in pounds/day; and EQUI158FL = total uncaptured lead emissions from EQUI 158, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.121.14	<p>The Permittee is prohibited from releasing emissions of pollutants through STRU 52 from any emission units other than EQUI 110, EQUI 112, EQUI 147 or EQUI 158 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on</p>

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 272 of 672

Requirement number	Requirement and citation
	revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A)& (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 53	Exhaust fan #11
5.122.1	The Permittee shall limit emissions of PM < 10 micron <= 0.03630 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.122.2	The Permittee shall limit emissions of PM < 2.5 micron <= 0.03630 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.122.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead <= 0.4329 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.122.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead <= 0.004705 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.122.5	The Permittee shall limit emissions of Nitrogen Oxides <= 0.2453 pounds per hour 1-hour average This is the emission rate used in modeling and it represents the contributions from EQUI 110 and EQUI 112. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.122.6	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 53 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 53 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.122.7	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 53 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum lead emissions from STRU 53, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 53, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum die casting lead emissions from STRU 53, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual die casting lead emissions from STRU 53, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.122.8	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 53 using the following equation:

Requirement number	Requirement and citation
	<p>STRU53PM10 = EQUI146FPM10 + EQUI150FPM10 + 0.01864</p> <p>where:</p> <p>STRU53PM10 = total daily average PM10 emissions emitted through STRU 53, in pounds/hour; EQUI146FPM10 = total daily average uncaptured PM10 emissions from EQUI 146, in pounds/hour; EQUI150FPM10 = total daily average uncaptured PM10 emissions from EQUI 150, in pounds/hour; and 0.01864 = total daily average PM10 emission contribution from EQUI 110 and EQUI 112, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.122.9	<p>PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 53 using the following equation: STRU53PM2.5 = EQUI146FPM2.5 + EQUI150FPM2.5 + 0.01864</p> <p>where:</p> <p>STRU53PM2.5 = total daily average PM2.5 emissions emitted through STRU 53, in pounds/hour; EQUI146FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 146, in pounds/hour; EQUI150FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 150, in pounds/hour; and 0.01864 = total daily average PM10 emission contribution from EQUI 110 and EQUI 112, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.122.10	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 53 using the following equations: STRU53L = EQUI146FL + EQUI150FL STRU53L3CS = STRU53L1 + STRU53L2 + STRU53L3 + . . . + STRU53L90 + STRU53L91 + STRU53L92</p> <p>where:</p> <p>STRU53L# = total daily lead emissions emitted through STRU 53, in pounds/day; STRU53L3CS = cumulative sum lead emissions emitted through STRU 53 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI146FL = total uncaptured lead emissions from EQUI 146, in pounds/day; and EQUI150FL = total uncaptured lead emissions from EQUI 150, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.122.9	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 53 using the following equations: STRU53L = EQUI146FL + EQUI150FL STRU53L3A = [(STRU53L2 + STRU53L3 + STRU53L4 + ... + STRU53L91 + STRU53L92 + STRU53L93) - STRU53L1] / 92 days</p> <p>where:</p> <p>STRU53L# = total daily lead emissions emitted through STRU 53, in pounds/day; STRU53L3A = 92-day rolling average lead emissions emitted through STRU 53 for the previous 92-day</p>

Requirement number	Requirement and citation
	period, in pounds/day; EQUI146FL = total uncaptured lead emissions from EQUI 146, in pounds/day; and EQUI150FL = total uncaptured lead emissions from EQUI 150, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.122.12	Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 53 using the following equations: $STRU53L = EQUI146FL + EQUI150FL$ $STRU53L365CS = STRU53L1 + STRU53L2 + STRU53L3 + \dots + STRU53L363 + STRU53L364 + STRU53L365$ where: STRU53L# = total daily lead emissions emitted through STRU 53, in pounds/day; STRU53L365CS = cumulative sum lead emissions emitted through STRU 53 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI146FL = total uncaptured lead emissions from EQUI 146, in pounds/day; and EQUI150FL = total uncaptured lead emissions from EQUI 150, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.122.10	Lead: Daily Calculations on the 366 th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 53 using the following equations: $STRU53L = EQUI146FL + EQUI150FL$ $STRU53L365RS = (STRU53L2 + STRU53L3 + STRU53L4 + \dots + STRU53L364 + STRU53L365 + STRU53L366) - STRU53L1$ where: STRU53L# = total daily lead emissions emitted through STRU 53, in pounds/day; STRU53L365RS = 365-day rolling sum lead emissions emitted through STRU 53 for the previous 365-day period, in pounds/year; EQUI146FL = total uncaptured lead emissions from EQUI 146, in pounds/day; and EQUI150FL = total uncaptured lead emissions from EQUI 150, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.122.11	The Permittee is prohibited from releasing emissions of pollutants through STRU 53 from any emission units other than EQUI 110, EQUI 112, EQUI 146, EQUI 150, or EQUI 172 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 56	Exhaust fan #14
5.123.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.0429 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.123.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.0429 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.122.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead ≤ 0.5925 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.123.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead ≤ 0.00644 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.123.5	The Permittee shall limit emissions of Nitrogen Oxides ≤ 0.2453 pounds per hour 1-hour average This is the emission rate used in modeling and it represents the contributions from EQUI 110 and EQUI 112. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.123.6	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 56 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 56 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.123.7	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 56 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum lead emissions from STRU 56, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 56, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum die casting lead emissions from STRU 56, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual die casting lead emissions from STRU 56, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.123.8	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 56 using the following equation: $\text{STRU56PM10} = \text{EQUI153FPM10} + \text{EQUI157FPM10} + 0.01864$ where: STRU56PM10 = total daily average PM10 emissions emitted through STRU 56, in pounds/hour; EQUI153FPM10 = total daily average uncaptured PM10 emissions from EQUI 153, in pounds/hour; EQUI157FPM10 = total daily average uncaptured PM10 emissions from EQUI 157, in pounds/hour; and 0.01864 = total daily average PM10 emission contribution from EQUI 110 and EQUI 112, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]

Requirement number	Requirement and citation
5.123.9	<p>PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 56 using the following equation: $\text{STRU56PM2.5} = \text{EQUI153FPM2.5} + \text{EQUI157FPM2.5} + 0.01864$</p> <p>where:</p> <p>STRU56PM2.5 = total daily average PM2.5 emissions emitted through STRU 56, in pounds/hour; EQUI153FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 153, in pounds/hour; EQUI157FPM2.5 = total daily average uncaptured PM2.5 emissions from EQUI 157, in pounds/hour; and 0.01864 = total daily average PM2.5 emission contribution from EQUI 110 and EQUI 112, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.123.10	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 56 using the following equations: $\text{STRU56L} = \text{EQUI153FL} + \text{EQUI157FL}$ $\text{STRU56L3CS} = \text{STRU56L1} + \text{STRU56L2} + \text{STRU56L3} + \dots + \text{STRU56L90} + \text{STRU56L91} + \text{STRU56L92}$</p> <p>where:</p> <p>STRU56L# = total daily lead emissions emitted through STRU 56, in pounds/day; STRU56L3CS = cumulative sum lead emissions emitted through STRU 56 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI153FL = total uncaptured lead emissions from EQUI 153, in pounds/day; and EQUI157FL = total uncaptured lead emissions from EQUI 157, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.123.11	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 56 using the following equations: $\text{STRU56L} = \text{EQUI153FL} + \text{EQUI157FL}$ $\text{STRU56L3A} = [(\text{STRU56L2} + \text{STRU56L3} + \text{STRU56L4} + \dots + \text{STRU56L91} + \text{STRU56L92} + \text{STRU56L93}) - \text{STRU56L1}] / 92 \text{ days}$</p> <p>where:</p> <p>STRU56L# = total daily lead emissions emitted through STRU 56, in pounds/day; STRU56L3A = 92-day rolling average lead emissions emitted through STRU 56 for the previous 92-day period, in pounds/day; EQUI153FL = total uncaptured lead emissions from EQUI 153, in pounds/day; and EQUI157FL = total uncaptured lead emissions from EQUI 157, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.123.12	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum lead emissions from STRU 56 using the following equations: $\text{STRU56L} = \text{EQUI153FL} + \text{EQUI157FL}$ $\text{STRU56L365CS} = \text{STRU56L1} + \text{STRU56L2} + \text{STRU56L3} + \dots + \text{STRU56L363} + \text{STRU56L364} + \text{STRU56L365}$</p>

Requirement number	Requirement and citation
	<p>where:</p> <p>STRU56L# = total daily lead emissions emitted through STRU 56, in pounds/day; STRU56L365CS = cumulative sum lead emissions emitted through STRU 56 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI153FL = total uncaptured lead emissions from EQUI 153, in pounds/day; and EQUI157FL = total uncaptured lead emissions from EQUI 157, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.123.13	<p>Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum).</p> <p>The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 56 using the following equations: STRU56L = EQUI153FL + EQUI157FL STRU56L365RS = (STRU56L2 + STRU56L3 + STRU56L4 +...+ STRU56L364 + STRU56L365 + STRU56L366) - STRU56L1</p> <p>where:</p> <p>STRU56L# = total daily lead emissions emitted through STRU 56, in pounds/day; STRU56L365RS = 365-day rolling sum lead emissions emitted through STRU 56 for the previous 365-day period, in pounds/year; EQUI153FL = total uncaptured lead emissions from EQUI 153, in pounds/day; and EQUI157FL = total uncaptured lead emissions from EQUI 157, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.123.14	<p>The Permittee is prohibited from releasing emissions of pollutants through STRU 56 from any emission units other than EQUI 110, EQUI 112, EQUI 153 or EQUI 157 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. (A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 57	Shipping vent 20
5.124.1	<p>The Permittee shall limit emissions of PM < 10 micron <= 0.00109 pounds per hour 3-hour average This is the emission rate used in modeling and it represents controlled emissions at process capacity. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.124.2	<p>The Permittee shall limit emissions of PM < 2.5 micron <= 0.00109 pounds per hour 3-hour average This is the emission rate used in modeling and it represents controlled emissions at process capacity. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.124.3	<p>The Permittee shall limit emissions of Lead <= 0.00002 pounds per day 3-hour average This is the emission rate used in modeling and it represents controlled emissions at capacity. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.124.4	<p>The Permittee is prohibited from releasing emissions of pollutants through STRU 57 from any emission units other than EQUI 113 and EQUI 114 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. (A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 59	Exhaust fan #12

Requirement number	Requirement and citation
5.125.1	The Permittee is prohibited from releasing emissions of pollutants through STRU 59 from any emission units other than EQUI 174 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 68	Melt Pot Room Vent
5.126.1	The Permittee shall limit emissions of PM < 10 micron <= 0.01744 pounds per hour 3-hour average This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.126.2	The Permittee shall limit emissions of PM < 2.5 micron <= 0.01744 pounds per hour 3-hour average This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.126.3	The Permittee shall limit emissions of Lead <= 0.00000115 pounds per day 3-hour average This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.126.4	The Permittee shall limit emissions of Nitrogen Oxides <= 0.2294 pounds per hour 1-hour average This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.126.5	The Permittee is prohibited from releasing emissions of pollutants through STRU 68 from any emission units other than combustion emissions from EQUI 101, EQUI 102 and EQUI 104 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. (A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 69	Doe Run Melt Pot Natural Gas Vent
5.127.1	The Permittee shall limit emissions of PM < 10 micron <= 0.00373 pounds per hour 3-hour average This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.127.2	The Permittee shall limit emissions of PM < 2.5 micron <= 0.00373 pounds per hour 3-hour average This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.127.3	The Permittee shall limit emissions of Lead <= 0.00000025 pounds per day 3-hour average This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.127.4	The Permittee shall limit emissions of Nitrogen Oxides <= 0.04902 pounds per hour 1-hour average This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.127.5	The Permittee is prohibited from releasing emissions of pollutants through STRU 69 from any emission units other than combustion emissions from EQUI 103 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. (A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]

Requirement number	Requirement and citation
STRU 70	Natural Gas Bake Oven Stack
5.128.1	The Permittee shall limit emissions of PM < 10 micron <= 0.00224 pounds per hour 3-hour average This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.128.2	The Permittee shall limit emissions of PM < 2.5 micron <= 0.00224 pounds per hour 3-hour average This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.128.3	The Permittee shall limit emissions of Lead <= 0.0000015 pounds per day 3-hour average This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.128.4	The Permittee shall limit emissions of Nitrogen Oxides <= 0.02941 pounds per hour 1-hour average This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.128.5	The Permittee is prohibited from releasing emissions of pollutants through STRU 70 from any emission units other than combustion emissions from EQUI 222 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. (A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 71	Coining Booth Stacks
5.129.1	The Permittee shall limit emissions of PM < 10 micron <= 0.0348 pounds per hour 3-hour average This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.129.2	The Permittee shall limit emissions of PM < 2.5 micron <= 0.0348 pounds per hour 3-hour average This is the emission rate used in modeling and it represents uncontrolled emissions at process capacity. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.129.3	The Permittee is prohibited from releasing emissions of pollutants through STRU 71 from any emission units other than EQUIs 223, 224, 225, 226, 227, 228, 229, 230, 231, and 232 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. (A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 72	Fume Hood Vent
5.130.1	The Permittee shall limit emissions of PM < 10 micron <= 0.006336 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.130.2	The Permittee shall limit emissions of PM < 2.5 micron <= 0.006336 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.130.3	Particulate Matter: Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 72 for the previous operating day using the formulas specified in this permit; and

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 280 of 672

Requirement number	Requirement and citation
	2) The total daily average hourly PM2.5 emissions from STRU 72 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.130.4	<p>PM < 10 micron: PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 72 using the following equation: $STRU72PM10 = EQUI240PM10$</p> <p>where:</p> <p>STRU72PM10 = total daily average PM10 emissions emitted through STRU 72 from EQUI 240, in pounds/hour; and EQUI240PM10 = total daily average PM10 emissions from EQUI 240, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.130.5	<p>PM < 2.5 micron: PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 72 using the following equation: $STRU72PM2.5 = EQUI240PM2.5$</p> <p>where:</p> <p>STRU72PM2.5 = total daily average PM2.5 emissions emitted through STRU 72 from EQUI 240, in pounds/hour; and EQUI240PM2.5 = total daily average PM2.5 emissions from EQUI 240, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.130.6	The Permittee is prohibited from releasing emissions of pollutants through STRU 72 from any emission units other than EQUI 240 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. (A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
STRU 73	Battery Terminal Post Coater Stack
5.131.1	The Permittee shall limit emissions of PM < 10 micron ≤ 0.01012 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.131.2	The Permittee shall limit emissions of PM < 2.5 micron ≤ 0.01012 pounds per hour daily average. [Minn. R. 7007.0080, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.131.3	<p>Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following:</p> <p>1) The total daily average hourly PM10 emissions from STRU 73 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 73 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]</p>
5.131.4	<p>PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 73 using the following equation: $STRU73PM10 = PM10UV + PM10VOC + PM10WB$</p> <p>where:</p>

Requirement number	Requirement and citation
	<p>STRU73PM10 = total daily average PM10 emissions emitted through STRU 73 from all EQUIs in COMG 2, COMG 4, and COMG 8, in pounds/hour; PM10UV = total daily average PM10 emissions from all EQUIs in COMG 2, in pounds/hour; PM10VOC = total daily average PM10 emissions from all EQUIs in COMG 4, in pounds/hour; PM10WB = total daily average PM10 emissions from all EQUIs in COMG 8, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.131.5	<p>PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 73 using the following equations: $STRU73PM2.5 = PM2.5UV + PM2.5VOC + PM2.5WB$</p> <p>where:</p> <p>STRU73PM2.5 = total daily average PM2.5 emissions emitted through STRU 73 from all EQUIs in COMG 2, COMG 4, and COMG 8, in pounds/hour; PM2.5UV = total daily average PM2.5 emissions from COMG 2, in pounds/hour; PM2.5VOC = total daily average PM2.5 emissions from COMG 4, in pounds/hour; PM2.5WB = total daily average PM2.5 emissions from COMG 8, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
STRU 74	Smog Hog #5 Stack
5.132.1	<p>The Permittee shall limit emissions of PM < 10 micron \leq 0.02084 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.132.2	<p>The Permittee shall limit emissions of PM < 2.5 micron \leq 0.02084 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.132.3	<p>Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 1.134 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.132.4	<p>Emission Limit Effective on the 93rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.01233 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
5.132.5	<p>Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 74 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 74 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]</p>
5.132.6	<p>Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 74 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 74, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead</p>

Requirement number	Requirement and citation
	emissions from STRU 74, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum annual lead emissions from STRU 74, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual lead emissions from STRU 74, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4-5]
5.132.7	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 74 using the following equation: $\text{STRU74PM10} = \text{EQUI130PM10} + \text{EQUI131PM10}$ where: STRU74PM10 = total daily average PM10 emissions emitted through STRU 74, in pounds/hour; EQUI130PM10 = total daily average PM10 stack emissions from EQUI 130, in pounds/hour; and EQUI131PM10 = total daily average PM10 stack emissions from EQUI 131, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.132.8	PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 74 using the following equation: $\text{STRU74PM2.5} = \text{EQUI130PM2.5} + \text{EQUI131PM2.5}$ where: STRU74PM2.5 = total daily average PM2.5 emissions emitted through STRU 74, in pounds/hour; EQUI130PM2.5 = total daily average PM2.5 stack emissions from EQUI 130, in pounds/hour; and EQUI131PM2.5 = total daily average PM2.5 stack emissions from EQUI 131, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]
5.132.9	Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum daily lead emissions from STRU 74 using the following equations: $\text{STRU74L} = \text{EQUI130L} + \text{EQUI131L}$ $\text{STRU74L3CS} = \text{STRU74L1} + \text{STRU74L2} + \text{STRU74L3} + \dots + \text{STRU74L90} + \text{STRU74L91} + \text{STRU74L92}$ where: STRU74L# = total daily lead emissions emitted through STRU 74 from EQUI 130 and EQUI 131, in pounds/day; STRU74L3CS = cumulative sum daily lead emissions emitted through STRU 74 from EQUI 130 and EQUI 131 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI130L = total lead stack emissions from EQUI 130, in pounds/day; and EQUI131L = total lead stack emissions from EQUI 131, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]
5.132.10	Lead: Daily Calculations on the 93 rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 74 the following equations:

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 283 of 672

Requirement number	Requirement and citation
	<p>STRU74L = EQUI130L + EQUI131L STRU74L3A = [(STRU74L2 + STRU74L3 + STRU74L4 + ... + STRU74L91 + STRU74L92 + STRU74L93) - STRU74L1] / 92 days</p> <p>where:</p> <p>STRU74L# = total daily lead emissions emitted through STRU 74, in pounds/day; STRU74L3A = 92-day rolling average lead emissions emitted through STRU 74 for the previous 92-day period, in pounds/day; EQUI130L = total lead stack emissions from EQUI 130, in pounds/day; and EQUI131L = total lead stack emissions from EQUI 131, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.132.11	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum annual lead emissions from STRU 74 using the following equations: STRU74L = EQUI130L + EQUI131L STRU74L365CS = STRU74L2 + STRU74L3 + STRU74L4 + . . . + STRU74L363+ STRU74L364+ STRU74L365</p> <p>where:</p> <p>STRU74L# = daily lead emissions emitted through STRU 74 from EQUI 130 and EQUI 131, in pounds/day; STRU74L365CS = cumulative sum lead emissions emitted through STRU 74 from EQUI 130 and EQUI 131 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI130L = total lead stack emissions from EQUI 130, in pounds/day; and EQUI131L = total lead stack emissions from EQUI 131, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.132.12	<p>Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum). The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 74 using the following equations: STRU74L = EQUI130L + EQUI131L STRU74L365S = (STRU74L2 + STRU74L3 + STRU74L4 + ... + STRU74L364 + STRU74L365 + STRU74L366) - STRU74L1</p> <p>where:</p> <p>STRU74L# = total daily lead emissions emitted through STRU 74, in pounds/day; STRU74L365S = 365-day rolling sum lead emissions emitted through STRU 74 for the previous 365-day period, in pounds/year; EQUI130L = total lead stack emissions from EQUI 130, in pounds/day; and EQUI131L = total lead stack emissions from EQUI 131, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.132.13	<p>The Permittee is prohibited from releasing emissions of pollutants through STRU 74 from any emission units other than EQUI 130 or EQUI 131 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 75	Smog Hog #8 Stack

Requirement number	Requirement and citation
5.133.1	The Permittee shall limit emissions of PM < 10 micron \leq 0.03348 pounds per hour daily average. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.133.2	The Permittee shall limit emissions of PM < 2.5 micron \leq 0.03348 pounds per hour daily average. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.132.3	Emission Limit for the First 92 Days Beginning on Permit Issuance Date. The Permittee shall limit emissions of Lead \leq 1.822 pounds per quarter 92-day sum. The cumulative amount must be calculated each operating day for the first 92 days beginning on the date of permit issuance as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.133.4	Emission Limit Effective on the 93 rd Day Following Permit Issuance and Thereafter. The Permittee shall limit emissions of Lead \leq 0.01980 pounds per day 92-day rolling average. The 92-day rolling average must be calculated each operating day as described later in this permit. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.133.5	Particulate Matter: Daily Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following: 1) The total daily average hourly PM10 emissions from STRU 75 for the previous operating day using the formulas specified in this permit; and 2) The total daily average hourly PM2.5 emissions from STRU 75 for the previous operating day using the formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.133.6	Lead: Recordkeeping. By 4:30pm on each day of operation, the Permittee shall calculate and record the following using the formulas specified in this permit: 1) The total lead emissions from STRU 75 the previous operating day using formulas specified in this permit; 2) For the first 92 days beginning on permit issuance date, the cumulative sum daily lead emissions from STRU 75, in pounds per quarter 92-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; 3) On the 93 rd day following permit issuance and daily thereafter, the 92-day rolling average daily lead emissions from STRU 75, in pounds per day, for the previous 92-day period using formulas specified in this permit; 4) For the first 365 days beginning on permit issuance date, the cumulative sum annual lead emissions from STRU 75, in pounds per year 365-day sum, for the previous operating days since the date of permit issuance using formulas specified in this permit; and 5) On the 366 th day following permit issuance and daily thereafter, the 365-day rolling sum annual lead emissions from STRU 75, in pounds per year, for the previous 365-day period using formulas specified in this permit. [Minn. R. 7007.0800, subps. 4-5]
5.133.7	PM < 10 micron: Daily Calculations. The Permittee shall calculate the average daily PM10 emissions from STRU 75 using the following equation: $\text{STRU75PM10} = \text{EQUI134PM10} + \text{EQUI135PM10}$ where: STRU75PM10 = total daily average PM10 emissions emitted through STRU 75, in pounds/hour; EQUI134PM10 = total daily average PM10 stack emissions from EQUI 134, in pounds/hour; and EQUI135PM10 = total daily average PM10 stack emissions from EQUI 135, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]

Requirement number	Requirement and citation
5.133.8	<p>PM < 2.5 micron: Daily Calculations. The Permittee shall calculate the average daily PM2.5 emissions from STRU 75 using the following equation: $\text{STRU75PM2.5} = \text{EQUI134PM2.5} + \text{EQUI135PM2.5}$</p> <p>where:</p> <p>STRU75PM2.5 = total daily average PM2.5 stack emissions emitted through STRU 75, in pounds/hour; and EQUI134PM2.5 = total daily average PM2.5 stack emissions from EQUI 134, in pounds/hour; and EQUI135PM2.5 = total daily average PM2.5 stack emissions from EQUI 135, in pounds/hour. [Minn. R. 7007.0800, subps. 4-5]</p>
5.133.9	<p>Lead: Daily Calculations for the First 92 Days Beginning on Permit Issuance Date (92-Day Cumulative Sum). The Permittee shall calculate the cumulative sum daily lead emissions from STRU 75 using the following equations: $\text{STRU75L} = \text{EQUI134L} + \text{EQUI135L}$ $\text{STRU75L3CS} = \text{STRU75L1} + \text{STRU75L2} + \text{STRU75L3} + \dots + \text{STRU75L90} + \text{STRU75L91} + \text{STRU75L92}$</p> <p>where:</p> <p>STRU75L# = total daily lead emissions emitted through STRU 75 from EQUI 134 and EQUI 135, in pounds/day; STRU75L3CS = cumulative sum daily lead emissions emitted through STRU 75 from EQUI 134 and EQUI 135 for the first 92 days beginning on permit issuance date, in pounds/quarter 92-day sum; EQUI134L = total lead stack emissions from EQUI 134, in pounds/day; and EQUI135L = total lead stack emissions from EQUI 135, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.133.10	<p>Lead: Daily Calculations on the 93rd Day Following Permit Issuance and Thereafter (92-Day Rolling Average). The Permittee shall calculate the 92-day rolling average daily lead emissions from STRU 75 using the following equations: $\text{STRU75L} = \text{EQUI134L} + \text{EQUI135L}$ $\text{STRU75L3A} = [(\text{STRU75L2} + \text{STRU75L3} + \text{STRU75L4} + \dots + \text{STRU75L91} + \text{STRU75L92} + \text{STRU75L93}) - \text{STRU75L1}] / 92 \text{ days}$</p> <p>where:</p> <p>STRU75L# = total daily lead emissions emitted through STRU 75, in pounds/day; STRU75L3A = 92-day rolling average lead emissions emitted through STRU 75 for the previous 92-day period, in pounds/day; EQUI134L = total lead stack emissions from EQUI 134, in pounds/day; and EQUI135L = total lead stack emissions from EQUI 135, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.132.11	<p>Lead: Daily Calculations for the First 365 Days Beginning on Permit Issuance Date (365-Day Cumulative Sum). The Permittee shall calculate the cumulative sum annual lead emissions from STRU 75 using the following equations: $\text{STRU75L} = \text{EQUI134L} + \text{EQUI135L}$ $\text{STRU75L365CS} = \text{STRU75L2} + \text{STRU75L3} + \text{STRU75L4} + \dots + \text{STRU75L363} + \text{STRU75L364} + \text{STRU75L365}$</p>

Requirement number	Requirement and citation
	<p>where:</p> <p>STRU75L# = daily lead emissions emitted through STRU 75 from EQUI 134 and EQUI 135, in pounds/day; STRU75L365CS = cumulative sum lead emissions emitted through STRU 75 from EQUI 134 and EQUI 135 for the first 365 days beginning on permit issuance date, in pounds/year; EQUI134L = total lead stack emissions from EQUI 134, in pounds/day; and EQUI135L = total lead stack emissions from EQUI 135, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.133.12	<p>Lead: Daily Calculations on the 366th Day Following Permit Issuance and Thereafter (365-Day Rolling Sum).</p> <p>The Permittee shall calculate the 365-day rolling sum annual lead emissions from STRU 75 using the following equations: STRU75L = EQUI134L + EQUI135L STRU75L365S = (STRU75L2 + STRU75L3 + STRU75L4 + . . . + STRU75L364 + STRU75L365 + STRU75L366) - STRU21L1</p> <p>where:</p> <p>STRU75L# = total daily lead emissions emitted through STRU 75, in pounds/day; STRU75L365S = 365-day rolling sum lead emissions emitted through STRU 75 for the previous 365-day period, in pounds/year; EQUI134L = total lead stack emissions from EQUI 134, in pounds/day; and EQUI135L = total lead stack emissions from EQUI 135, in pounds/day. [Minn. R. 7007.0800, subps. 4-5]</p>
5.133.13	<p>The Permittee is prohibited from releasing emissions of pollutants through STRU 75 from any emission units other than EQUI 134 or EQUI 135 without obtaining a major amendment to this permit to revise emission limits and compliance demonstration methods based on revised dispersion modeling as described elsewhere in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.1500, subp. 1(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
TREA 1	Smog Hog #15
5.134.1	<p>The Permittee shall vent controlled emissions from EQUIs 101, 102, 103, 104, and 221 as exhausted from TREA 60 to TREA 1 whenever EQUIs 101, 102, 103, 104, or 221 operate, and operate and maintain TREA 1 at all times that any emissions are vented to TREA 1. The Permittee shall document periods of non-operation of TREA 1 whenever EQUIs 101, 102, 103, 104, or 221 are operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.134.2	<p>The Permittee shall comply with the requirements of COMG 11 whenever emissions are vented to TREA 1. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.134.3	<p>The Permittee shall operate and maintain the electrostatic precipitator (ESP) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]</p>
5.134.4	<p>Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of the ESP at all times. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>

Requirement number	Requirement and citation
5.134.5	Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. [Minn. R. 7007.0800, subps. 4-5]
5.134.6	Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the ESP On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]
5.134.7	Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.134.8	Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.134.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range (e.g., total power input); or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.134.10	Pre-Filter and Cell Maintenance: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher waste water, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]
TREA 25	Smog Hog #1
5.135.1	The Permittee shall vent controlled emissions from EQUIs 121, 122, and 123 as exhausted from TREA 61 to TREA 25 whenever EQUIs 121, 122, or 123 operate, and operate and maintain TREA 25 at all times that any emissions are vented to TREA 25. The Permittee shall document periods of non-operation of TREA 25 whenever EQUIs 121, 122, or 123 are operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.135.2	The Permittee shall comply with the requirements of COMG 12 whenever emissions are vented to TREA 25. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.135.3	The Permittee shall operate and maintain the electrostatic precipitator (ESP) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]

Requirement number	Requirement and citation
5.135.4	Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. [Minn. R. 7007.0800, subps. 4-5]
5.135.5	Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of the ESP at all times. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.135.6	Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.135.7	Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the ESP On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]
5.135.8	Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.135.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range (e.g., total power input); or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.135.10	Pre-Filter and Cell Maintenance: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher waste water, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]
TREA 26	Smog Hog #2
5.136.1	The Permittee shall vent controlled emissions from EQUIs 124, 125, 126 and 157 as exhausted from TREAs 62 and 63 to TREA 26 whenever EQUIs 124, 125, 126 or 157 operate, and operate and maintain TREA 26 at all times that any emissions are vented to TREA 26. The Permittee shall document periods of non-operation of TREA 42 whenever EQUIs 124, 125, 126 or 157 are operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.136.2	The Permittee shall comply with the requirements of COMG 12 whenever emissions are vented to TREA 26. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 289 of 672

Requirement number	Requirement and citation
5.136.3	The Permittee shall operate and maintain the electrostatic precipitator (ESP) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.136.4	Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. [Minn. R. 7007.0800, subps. 4-5]
5.136.5	Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of the ESP at all times. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.136.6	Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.136.7	Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the ESP On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]
5.136.8	Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.136.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range (e.g., total power input); or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.136.10	Pre-Filter and Cell Maintenance: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher waste water, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]
TREA 27	Smog Hog #3
5.137.1	The Permittee shall vent controlled emissions from EQUIs 127, 128, and 129 as exhausted from TREA 64 to TREA 27 whenever EQUIs 127, 128, or 129 operate, and operate and maintain TREA 27 at all times that any emissions are vented to TREA 27. The Permittee shall document periods of non-operation of TREA 27 whenever EQUIs 127, 128, or 129 are operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.137.2	The Permittee shall comply with the requirements of COMG 12 whenever emissions are vented to TREA 27. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.137.3	The Permittee shall operate and maintain the electrostatic precipitator (ESP) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.137.4	Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. [Minn. R. 7007.0800, subps. 4-5]
5.137.5	Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of the ESP at all times. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.137.6	Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.137.7	Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the ESP On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]
5.137.8	Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.137.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range (e.g., total power input); or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.137.10	Pre-Filter and Cell Maintenance: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher waste water, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]
TREA 30	Smog Hog #6
5.138.1	The Permittee shall vent controlled emissions from EQUIs 132 and 133 as exhausted from TREA 66 to TREA 30 whenever EQUIs 132 or 133 operate, and operate and maintain TREA 30 at all times that any

Requirement number	Requirement and citation
	emissions are vented to TREA 30. The Permittee shall document periods of non-operation of TREA 30 whenever EQUIs 132 or 133 are operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.138.2	The Permittee shall comply with the requirements of COMG 12 whenever emissions are vented to TREA 30. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.138.3	The Permittee shall operate and maintain the electrostatic precipitator (ESP) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.138.4	Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. [Minn. R. 7007.0800, subps. 4-5]
5.138.5	Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of the ESP at all times. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800 subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.138.6	Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.138.7	Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the ESP On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]
5.138.8	Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.138.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range (e.g., total power input); or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.138.10	Pre-Filter and Cell Maintenance: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher waste water, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]

Requirement number	Requirement and citation
TREA 33	Smog Hog #9
5.139.1	The Permittee shall vent controlled emissions from EQUI 136 as exhausted from TREA 68 to TREA 33 whenever EQUI 136 operates, and operate and maintain TREA 33 at all times that any emissions are vented to TREA 33. The Permittee shall document periods of non-operation of TREA 33 whenever EQUI 136 is operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.139.2	The Permittee shall comply with the requirements of COMG 12 whenever emissions are vented to TREA 33. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.139.3	The Permittee shall operate and maintain the electrostatic precipitator (ESP) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.139.4	Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. [Minn. R. 7007.0800, subps. 4-5]
5.139.5	Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of the ESP at all times. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.139.6	Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.139.7	Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the ESP On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]
5.139.8	Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.139.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range (e.g., total power input); or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.139.10	Pre-Filter and Cell Maintenance: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall

Requirement number	Requirement and citation
	dispose of all lead-soiled materials including, but not limited to, dishwasher waste water, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]
TREA 34	Smog Hog #10
5.140.1	The Permittee shall vent controlled emissions from EQUIs 137 and 138 as exhausted from TREA 69 to TREA 34 whenever EQUIs 137 or 138 operate, and operate and maintain TREA 34 at all times that any emissions are vented to TREA 34. The Permittee shall document periods of non-operation of TREA 34 whenever EQUIs 137 or 138 are operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.140.2	The Permittee shall comply with the requirements of COMG 12 whenever emissions are vented to TREA 34. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.140.3	The Permittee shall operate and maintain the electrostatic precipitator (ESP) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.140.4	Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. [Minn. R. 7007.0800, subps. 4-5]
5.140.5	Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of the ESP at all times. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.140.6	Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.140.7	Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the ESP On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]
5.140.8	Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.140.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range (e.g., total power input); or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the ESP. The Permittee shall keep a record of the

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 294 of 672

Requirement number	Requirement and citation
	type and date of any corrective action taken for the ESP. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.140.10	Pre-Filter and Cell Maintenance: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher waste water, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]
TREA 35	Smog Hog #11
5.141.1	The Permittee shall vent controlled emissions from EQUIs 139 and 140 as exhausted from TREA 70 to TREA 35 whenever EQUIs 139 or 140 operate, and operate and maintain TREA 35 at all times that any emissions are vented to TREA 35. The Permittee shall document periods of non-operation of TREA 35 whenever EQUIs 139 or 140 are operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.141.2	The Permittee shall comply with the requirements of COMG 12 whenever emissions are vented to TREA 35. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.141.3	The Permittee shall operate and maintain the electrostatic precipitator (ESP) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.141.4	Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. [Minn. R. 7007.0800, subps. 4-5]
5.141.5	Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of the ESP at all times. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subp. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.141.6	Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.141.7	Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the ESP On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]
5.141.8	Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.141.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range (e.g., total power input); or

Requirement number	Requirement and citation
	<p>- the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]</p>
5.141.10	<p>Pre-Filter and Cell Maintenance: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher waste water, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]</p>
TREA 36	Smog Hog #12
5.142.1	<p>The Permittee shall vent controlled emissions from EQUIs 141, 142, 143, and 155 as exhausted from TREAs 71 and 72 to TREA 36 whenever EQUIs 141, 142, 143, or 155 operate, and operate and maintain TREA 36 at all times that any emissions are vented to TREA 36. The Permittee shall document periods of non-operation of TREA 36 whenever EQUIs 141, 142, 143, or 155 are operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.142.2	<p>The Permittee shall comply with the requirements of COMG 12 whenever emissions are vented to TREA 36. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.142.3	<p>The Permittee shall operate and maintain the electrostatic precipitator (ESP) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]</p>
5.142.4	<p>Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. [Minn. R. 7007.0800, subps. 4-5]</p>
5.142.5	<p>Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of the ESP at all times. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.142.6	<p>Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]</p>
5.142.7	<p>Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the ESP On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]</p>
5.142.8	<p>Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]</p>

Requirement number	Requirement and citation
5.142.9	<p>Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:</p> <ul style="list-style-type: none"> - any recorded operating parameter is outside the required operating range (e.g., total power input); or - the ESP or any of its components are found during the inspections to need repair. <p>Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]</p>
5.142.10	<p>Pre-Filter and Cell Maintenance: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher waste water, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]</p>
TREA 39	Smog Hog #16
5.143.1	<p>The Permittee shall vent controlled emissions from EQUIs 146 and 158 as exhausted from TREA 73 to TREA 39 whenever EQUIs 146 or 158 operate, and operate and maintain TREA 39 at all times that any emissions are vented to TREA 39. The Permittee shall document periods of non-operation of TREA 39 whenever EQUIs 146 or 158 are operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.143.2	<p>The Permittee shall comply with the requirements of COMG 12 whenever emissions are vented to TREA 39. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.143.3	<p>The Permittee shall operate and maintain the electrostatic precipitator (ESP) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]</p>
5.143.4	<p>Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. [Minn. R. 7007.0800, subps. 4-5]</p>
5.143.5	<p>Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of the ESP at all times. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.143.6	<p>Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]</p>
5.143.7	<p>Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the ESP On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]</p>
5.143.8	<p>Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the</p>

Requirement number	Requirement and citation
	quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.143.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range (e.g., total power input); or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.143.10	Pre-Filter and Cell Maintenance: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher waste water, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]
TREA 40	Smog Hog #17
5.144.1	The Permittee shall vent controlled emissions from EQUI 147 as exhausted from TREA 74 to TREA 40 whenever EQUI 147 operates, and operate and maintain TREA 40 at all times that any emissions are vented to TREA 40. The Permittee shall document periods of non-operation of TREA 40 whenever EQUI 147 is operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.144.2	The Permittee shall comply with the requirements of COMG 12 whenever emissions are vented to TREA 40. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.144.3	The Permittee shall operate and maintain the electrostatic precipitator (ESP) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.144.4	Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. [Minn. R. 7007.0800, subps. 4-5]
5.144.5	Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of the ESP at all times. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.144.6	Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.144.7	Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the ESP On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]

Requirement number	Requirement and citation
5.144.8	Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.144.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range (e.g., total power input); or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.144.10	Pre-Filter and Cell Maintenance: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher waste water, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]
TREA 41	Smog Hog #18
5.145.1	The Permittee shall vent controlled emissions from EQUIs 149 and 150 as exhausted from TREA 75 to TREA 41 whenever EQUIs 149 or 150 operate, and operate and maintain TREA 41 at all times that any emissions are vented to TREA 41. The Permittee shall document periods of non-operation of the control equipment TREA 41 whenever EQUIs 149 or 150 are operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.145.2	The Permittee shall comply with the requirements of COMG 12 whenever emissions are vented to TREA 41. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.145.3	The Permittee shall operate and maintain the electrostatic precipitator (ESP) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.145.4	Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. [Minn. R. 7007.0800, subps. 4-5]
5.145.5	Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of the ESP at all times. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.145.6	Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]

Requirement number	Requirement and citation
5.145.7	Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the ESP On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]
5.145.8	Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.145.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range (e.g., total power input); or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.145.10	Pre-Filter and Cell Maintenance: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher waste water, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]
TREA 42	Smog Hog #19
5.146.1	The Permittee shall vent emissions from EQUIs 152 and 156 as exhausted from TREA 76 to TREA 42 whenever EQUIs 152 or 156 operate, and operate and maintain TREA 42 at all times that any emissions are vented to TREA 42. The Permittee shall document periods of non-operation of TREA 42 whenever EQUIs 152 or 156 are operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.146.2	The Permittee shall comply with the requirements of COMG 12 whenever emissions are vented to TREA 42. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.146.3	The Permittee shall operate and maintain the electrostatic precipitator (ESP) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.146.4	Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. [Minn. R. 7007.0800, subps. 4-5]
5.146.5	Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of the ESP at all times. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.146.6	Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.146.7	Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the ESP On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]
5.146.8	Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.146.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range (e.g., total power input); or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the) O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.146.10	Pre-Filter and Cell Maintenance: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher waste water, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]
TREA 43	Smog Hog #20
5.147.1	The Permittee shall vent controlled emissions from EQUIs 153 and 154 as exhausted from TREA 77 to TREA 43 whenever EQUIs 153 or 154 operate, and operate and maintain TREA 38 at all times that any emissions are vented to TREA 38. The Permittee shall document periods of non-operation of TREA 43 whenever EQUIs 153 or 154 are operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.147.2	The Permittee shall comply with the requirements of COMG 12 whenever emissions are vented to TREA 43. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.147.3	The Permittee shall operate and maintain the electrostatic precipitator (ESP) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.147.4	Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. [Minn. R. 7007.0800, subps. 4-5]

Requirement number	Requirement and citation
5.147.5	Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of the ESP at all times. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.147.6	Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.147.7	Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the ESP On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]
5.147.8	Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.147.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range (e.g., total power input); or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the) O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.147.10	Pre-Filter and Cell Maintenance: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher waste water, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]
TREA 52	HEPA Filter - Tool Room 1 Abrasive Blasting
5.148.1	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Particulate Matter ≥ 99.98 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.148.2	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 10 micron ≥ 99.98 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.148.3	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 2.5 micron ≥ 99.98 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.148.4	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Lead >= 99.90 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.148.5	The Permittee shall vent emissions from EQUI 113 to TREA 52 whenever EQUI 113 operates, and operate and maintain TREA 52 at all times that any emissions are vented to TREA 52. The Permittee shall document periods of non-operation of the control equipment TREA 52 whenever EQUI 113 is operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.148.6	If the Permittee replaces TREA 52, the replacement control must meet or exceed the control efficiency requirements of TREA 52 as well as comply with all other requirements of TREA 52. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. If no amendment is needed for the replacement, the Permittee shall submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.148.7	The Permittee shall operate and maintain the HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.148.8	Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of each HEPA filter with respect to alignment, saturation, tears, holes, and any other condition that may affect the filter's performance. The Permittee shall maintain a daily written record of filter inspections. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.148.9	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.148.10	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
TREA 53	HEPA Filter - Tool Room 2 Abrasive Blasting
5.149.1	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Particulate Matter >= 99.98 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.149.2	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 10 micron >= 99.98 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.149.3	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 2.5 micron >= 99.98 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn.

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 303 of 672

Requirement number	Requirement and citation
	R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.149.4	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Lead >= 99.90 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.149.5	The Permittee shall vent emissions from EQUI 114 to TREA 53 whenever EQUI 114 operates, and operate and maintain TREA 53 at all times that any emissions are vented to TREA 53. The Permittee shall document periods of non-operation of the control equipment TREA 53 whenever EQUI 114 is operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.149.6	<p>If the Permittee replaces TREA 53, the replacement control must meet or exceed the control efficiency requirements of TREA 53 as well as comply with all other requirements of TREA 53. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable.</p> <p>If no amendment is needed for the replacement, the Permittee shall submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
5.149.7	The Permittee shall operate and maintain the HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.149.8	Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of each HEPA filter with respect to alignment, saturation, tears, holes and any other condition that may affect the filter's performance. The Permittee shall maintain a daily written record of filter inspections. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.149.9	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.149.10	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
TREA 54	HEPA Filter - DC Abrasive Blasting
5.150.1	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Particulate Matter >= 99.98 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.150.2	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 10 micron >= 99.98 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.150.3	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for PM < 2.5 micron >= 99.98 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn.

Requirement number	Requirement and citation
	R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.150.4	The Permittee shall operate and maintain control equipment such that it achieves a control efficiency for Lead >= 99.90 percent control efficiency. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.150.5	The Permittee shall vent emissions from EQUI 115 to TREA 54 whenever EQUI 115 operates, and operate and maintain TREA 54 at all times that any emissions are vented to TREA 54. The Permittee shall document periods of non-operation of the control equipment TREA 54 whenever EQUI 115 is operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.150.6	If the Permittee replaces TREA 54, the replacement control must meet or exceed the control efficiency requirements of TREA 54 as well as comply with all other requirements of TREA 54. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. If no amendment is needed for the replacement, the Permittee shall submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.150.7	The Permittee shall operate and maintain the HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.150.8	Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of each HEPA filter with respect to alignment, saturation, tears, holes and any other condition that may affect the filter's performance. The Permittee shall maintain a daily written record of filter inspections. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.150.9	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.150.10	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
TREA 55	Nederman Filter - EQUI 84
5.151.1	The Permittee shall operate and maintain control equipment such that it meets the requirements of COMG 14. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.151.2	The Permittee shall vent emissions from EQUI 84 to TREA 55 whenever EQUI 84 operates, and operate and maintain TREA 55 at all times that any emissions are vented to TREA 55. The Permittee shall document periods of non-operation of the control equipment TREA 55 whenever EQUI 84 is operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.151.3	<p>If the Permittee replaces TREA 55, the replacement control must meet or exceed the control efficiency requirements of COMG 14 as well as comply with all other requirements of COMG 14. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable.</p> <p>If no amendment is needed for the replacement, the Permittee shall submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
TREA 56	Nederman Filter - EQUI 88
5.152.1	The Permittee shall operate and maintain control equipment such that it meets the requirements of COMG 14. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.152.2	The Permittee shall vent emissions from EQUI 88 to TREA 56 whenever EQUI 88 operates, and operate and maintain TREA 56 at all times that any emissions are vented to TREA 56. The Permittee shall document periods of non-operation of the control equipment TREA 56 whenever EQUI 88 is operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.152.3	<p>If the Permittee replaces TREA 56, the replacement control must meet or exceed the control efficiency requirements of COMG 14 as well as comply with all other requirements of COMG 14. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable.</p> <p>If no amendment is needed for the replacement, the Permittee shall submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
TREA 57	Nederman Filter - EQUI 95
5.153.1	The Permittee shall operate and maintain control equipment such that it meets the requirements of COMG 14. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.153.2	The Permittee shall vent emissions from EQUI 95 to TREA 57 whenever EQUI 95 operates, and operate and maintain TREA 57 at all times that any emissions are vented to TREA 57. The Permittee shall document periods of non-operation of the control equipment TREA 57 whenever EQUI 95 is operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.153.3	<p>If the Permittee replaces TREA 57, the replacement control must meet or exceed the control efficiency requirements of COMG 14 as well as comply with all other requirements of COMG 14. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable.</p> <p>If no amendment is needed for the replacement, the Permittee shall submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
TREA 58	Nederman Filter - EQUI 219

Requirement number	Requirement and citation
5.154.1	The Permittee shall operate and maintain control equipment such that it meets the requirements of COMG 14. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.154.2	The Permittee shall vent emissions from EQUI 219 to TREA 58 whenever EQUI 219 operates, and operate and maintain TREA 58 at all times that any emissions are vented to TREA 58. The Permittee shall document periods of non-operation of the control equipment TREA 58 whenever EQUI 219 is operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.154.3	If the Permittee replaces TREA 58, the replacement control must meet or exceed the control efficiency requirements of COMG 14 as well as comply with all other requirements of COMG 14. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. If no amendment is needed for the replacement, the Permittee shall submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
TREA 59	Nederman Filter - EQUI 220
5.155.1	The Permittee shall operate and maintain control equipment such that it meets the requirements of COMG 14. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.155.2	The Permittee shall vent emissions from EQUI 220 to TREA 59 whenever EQUI 220 operates, and operate and maintain TREA 59 at all times that any emissions are vented to TREA 59. The Permittee shall document periods of non-operation of the control equipment TREA 59 whenever EQUI 220 is operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.155.3	If the Permittee replaces TREA 59, the replacement control must meet or exceed the control efficiency requirements of COMG 14 as well as comply with all other requirements of COMG 14. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. If no amendment is needed for the replacement, the Permittee shall submit an electronic notice to the Agency using Form CR-05. The notice must be received by the Agency seven working days prior to the commencement/start of replacement. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
TREA 60	Nederman Filter 15N - STRU 1
5.156.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.156.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall

Requirement number	Requirement and citation
	be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.156.3	The Permittee shall vent emissions from EQUIs 101, 102, 103, 104, and 221 to TREA 60 whenever EQUIs 101, 102, 103, 104, or 221 are operating, and operate and maintain TREA 60 at all times that any emissions are vented to TREA 60. The Permittee shall document periods of non-operation of the control equipment TREA 60 whenever EQUI 101, 102, 103, 104, or 221 are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.156.4	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.156.5	The Permittee shall comply with the requirements of COMG 11 whenever emissions are vented to TREA 60. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.156.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.156.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.156.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.156.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 61	Nederman Filter 1N - STRU 15
5.157.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.157.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The

Requirement number	Requirement and citation
	range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.157.3	The Permittee shall vent emissions from EQUIs 121, 122, and 123 to TREA 61 whenever EQUIs 121, 122, or 123 are operating, and operate and maintain TREA 61 at all times that any emissions are vented to TREA 61. The Permittee shall document periods of non-operation of the control equipment TREA 61 whenever EQUIs 121, 122, or 123 are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.157.4	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.157.5	The Permittee shall comply with the requirements of COMG 12 whenever emissions are vented to TREA 61. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.157.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.157.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.157.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.157.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 62	Nederman Filter 2N1 - STRU 16
5.158.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.158.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall

Requirement number	Requirement and citation
	record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.158.3	The Permittee shall vent emissions from EQUIs 126 and 157 to TREA 62 whenever EQUIs 126 or 157 are operating, and operate and maintain TREA 62 at all times that any emissions are vented to TREA 62. The Permittee shall document periods of non-operation of the control equipment TREA 62 whenever EQUIs 126 or 157 are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.158.4	The Permittee comply with the requirements of COMG 12 whenever emissions are vented to TREA 62. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.158.5	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.158.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.158.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.158.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.158.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 63	Nederman Filter 2N2 - STRU 16
5.159.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.159.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800,

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 310 of 672

Requirement number	Requirement and citation
	subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.159.3	The Permittee shall vent emissions from EQUIs 124 and 125 to TREA 63 whenever EQUIs 124 or 125 are operating, and operate and maintain TREA 63 at all times that any emissions are vented to TREA 63. The Permittee shall document periods of non-operation of the control equipment TREA 63 whenever EQUIs 124 or 125 are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.159.4	The Permittee comply with the requirements of COMG 12 whenever emissions are vented to TREA 63. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.159.5	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.159.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.159.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.159.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.159.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 64	Nederman Filter 3N - STRU 17
5.160.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.160.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800,

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 311 of 672

Requirement number	Requirement and citation
	subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.160.3	The Permittee shall vent emissions from EQUIs 127, 128 and 129 to TREA 64 whenever EQUIs 127, 128 or 129 are operating, and operate and maintain TREA 64 at all times that any emissions are vented to TREA 64. The Permittee shall document periods of non-operation of the control equipment TREA 64 whenever EQUIs 127, 128 or 129 are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.160.4	The Permittee comply with the requirements of COMG 12 whenever emissions are vented to TREA 64. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.160.5	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.160.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.160.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.160.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 5]
5.160.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 65	Nederman Device 5N - STRU 74
5.161.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.161.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800,

Requirement number	Requirement and citation
	subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.161.3	The Permittee shall vent emissions from EQUIs 130 and 131 to TREA 65 whenever EQUIs 130 or 131 are operating, and operate and maintain TREA 65 at all times that any emissions are vented to TREA 65. The Permittee shall document periods of non-operation of the control equipment TREA 65 whenever EQUIs 130 or 131 are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.161.4	The Permittee comply with the requirements of COMG 12 whenever emissions are vented to TREA 65. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.161.5	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.161.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.161.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.161.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.161.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 66	Nederman Filter 6N - STRU 20
5.162.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.162.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800,

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 313 of 672

Requirement number	Requirement and citation
	subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.162.3	The Permittee shall vent emissions from EQUIs 132 and 133 to TREA 66 whenever EQUIs 132 or 133 are operating, and operate and maintain TREA 66 at all times that any emissions are vented to TREA 66. The Permittee shall document periods of non-operation of the control equipment TREA 66 whenever EQUIs 132 or 133 are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.162.4	The Permittee comply with the requirements of COMG 12 whenever emissions are vented to TREA 66. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.162.5	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.162.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.162.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.162.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.162.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 67	Nederman Device 8N - STRU 75
5.163.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.163.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800,

Requirement number	Requirement and citation
	subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.163.3	The Permittee shall vent emissions from EQUIs 134 and 135 to TREA 67 whenever EQUIs 134 or 135 are operating, and operate and maintain TREA 67 at all times that any emissions are vented to TREA 67. The Permittee shall document periods of non-operation of the control equipment TREA 67 whenever EQUIs 134 or 135 are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.163.4	The Permittee comply with the requirements of COMG 12 whenever emissions are vented to TREA 67. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.163.5	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.163.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.163.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.163.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.163.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 68	Nederman Filter 9N - STRU 23
5.164.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.164.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800,

Requirement number	Requirement and citation
	subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.164.3	The Permittee shall vent emissions from EQUI 136 to TREA 68 whenever EQUI 136 is operating, and operate and maintain TREA 68 at all times that any emissions are vented to TREA 68. The Permittee shall document periods of non-operation of the control equipment TREA 68 whenever EQUI 136 is operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.164.4	The Permittee comply with the requirements of COMG 12 whenever emissions are vented to TREA 68. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.164.5	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.164.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.164.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.164.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.164.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 69	Nederman Filter 10N - STRU 24
5.165.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.165.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.165.3	The Permittee shall vent emissions from EQUIs 137 and 138 to TREA 69 whenever EQUIs 137 or 138 are operating, and operate and maintain TREA 69 at all times that any emissions are vented to TREA 69. The Permittee shall document periods of non-operation of the control equipment TREA 69 whenever EQUIs 137 or 138 are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.165.4	The Permittee comply with the requirements of COMG 12 whenever emissions are vented to TREA 69. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.165.5	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.165.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.165.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.165.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.165.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 70	Nederman Filter 11N - STRU 25
5.166.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.166.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.166.3	The Permittee shall vent emissions from EQUIs 139 and 140 to TREA 70 whenever EQUIs 139 or 140 are operating, and operate and maintain TREA 70 at all times that any emissions are vented to TREA 70. The Permittee shall document periods of non-operation of the control equipment TREA 70 whenever EQUIs 139 or 140 are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.166.4	The Permittee comply with the requirements of COMG 12 whenever emissions are vented to TREA 70. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.166.5	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.166.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.166.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.166.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.166.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 71	Nederman Filter 12N1 - STRU 26
5.167.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.167.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.167.3	The Permittee shall vent emissions from EQUIs 141 and 143 to TREA 71 whenever EQUIs 141 or 143 are operating, and operate and maintain TREA 71 at all times that any emissions are vented to TREA 71. The Permittee shall document periods of non-operation of the control equipment TREA 71 whenever EQUIs 141 or 143 are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.167.4	The Permittee comply with the requirements of COMG 12 whenever emissions are vented to TREA 71. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.167.5	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.167.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.167.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.167.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.167.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 72	Nederman Filter 12N2 - STRU 26
5.168.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.168.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.168.3	The Permittee shall vent emissions from EQUIs 142 and 155 to TREA 72 whenever EQUIs 142 or 155 are operating, and operate and maintain TREA 72 at all times that any emissions are vented to TREA 72. The Permittee shall document periods of non-operation of the control equipment TREA 72 whenever EQUIs 142 or 155 are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.168.4	The Permittee comply with the requirements of COMG 12 whenever emissions are vented to TREA 72. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.168.5	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.168.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.168.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.168.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.168.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 73	Nederman Filter 16N - STRU 30
5.169.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.169.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.169.3	The Permittee shall vent emissions from EQUIs 146 and 158 to TREA 73 whenever EQUIs 146 or 158 are operating, and operate and maintain TREA 73 at all times that any emissions are vented to TREA 73. The Permittee shall document periods of non-operation of the control equipment TREA 73 whenever EQUIs 146 or 158 are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.169.4	The Permittee comply with the requirements of COMG 12 whenever emissions are vented to TREA 73. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.169.5	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.169.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.169.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.169.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.169.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 74	Nederman Filter 17N - STRU 31
5.170.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.170.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.170.3	The Permittee shall vent emissions from EQUI 147 to TREA 74 whenever EQUI 147 is operating, and operate and maintain TREA 74 at all times that any emissions are vented to TREA 74. The Permittee shall document periods of non-operation of the control equipment TREA 74 whenever EQUI 147 is operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.170.4	The Permittee comply with the requirements of COMG 12 whenever emissions are vented to TREA 74. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.170.5	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.170.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.170.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.170.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.170.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 75	Nederman Filter 18N - STRU 32
5.171.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.171.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.171.3	The Permittee shall vent emissions from EQUIs 149 and 150 to TREA 75 whenever EQUIs 149 or 150 are operating, and operate and maintain TREA 75 at all times that any emissions are vented to TREA 75. The Permittee shall document periods of non-operation of the control equipment TREA 75 whenever EQUIs 149 or 150 are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.171.4	The Permittee comply with the requirements of COMG 12 whenever emissions are vented to TREA 75. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.171.5	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.171.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.171.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.171.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.171.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 76	Nederman Filter 19N - STRU 33
5.172.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.172.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.172.3	The Permittee shall vent emissions from EQUIs 152 and 156 to TREA 76 whenever EQUIs 152 or 156 are operating, and operate and maintain TREA 76 at all times that any emissions are vented to TREA 76. The Permittee shall document periods of non-operation of the control equipment TREA 76 whenever EQUIs 152 or 156 are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.172.4	The Permittee comply with the requirements of COMG 12 whenever emissions are vented to TREA 76. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.172.5	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.172.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.172.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.172.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.172.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 77	Nederman Filter 20N - STRU 34
5.173.1	The Permittee shall limit Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.173.2	The Permittee shall limit Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascals, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours during operating hours. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]

Requirement number	Requirement and citation
5.173.3	The Permittee shall vent emissions from EQUIs 153 and 154 to TREA 77 whenever EQUIs 153 or 154 are operating, and operate and maintain TREA 77 at all times that any emissions are vented to TREA 77. The Permittee shall document periods of non-operation of the control equipment TREA 77 whenever EQUIs 153 or 154 are operating. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.173.4	The Permittee comply with the requirements of COMG 12 whenever emissions are vented to TREA 77. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.173.5	Pressure Drop: Daily Recordkeeping. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.173.6	Daily Inspections: Once each operating day, the Permittee shall verify if the pressure drop reading is such that filter maintenance is required as per manufacturer's specifications. If maintenance is required, the Permittee shall proceed to clean the unit as per manufacturer's specifications before the unit is placed on operation the next day. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
5.173.7	The Permittee shall operate and maintain the Stage 1, Stage 2, and HEPA filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.173.8	Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturer's specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.173.9	Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
TREA 78	Smog Hog #5
5.174.1	The Permittee shall vent controlled emissions from EQUIs 130 and 131 as exhausted from TREA 65 to TREA 78 whenever EQUIs 130 or 131 operate, and operate and maintain TREA 78 at all times that any emissions are vented to TREA 78. The Permittee shall document periods of non-operation of TREA 78 whenever EQUIs 130 or 131 are operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.174.2	The Permittee shall comply with the requirements of COMG 12 whenever emissions are vented to TREA 78. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.174.3	The Permittee shall operate and maintain the electrostatic precipitator (ESP) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]
5.174.4	Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. [Minn. R. 7007.0800, subps. 4-5]

Requirement number	Requirement and citation
5.174.5	Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of the ESP at all times. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.174.6	Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.174.7	Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the ESP On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]
5.174.8	Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.174.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range (e.g., total power input); or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the) O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.174.10	Pre-Filter and Cell Maintenance: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher waste water, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]
TREA 79	Smog Hog #8
5.175.1	The Permittee shall vent controlled emissions from EQUIs 134 and 135 as exhausted from TREA 67 to TREA 79 whenever EQUIs 134 or 135 operate, and operate and maintain TREA 79 at all times that any emissions are vented to TREA 79. The Permittee shall document periods of non-operation of TREA 79 whenever EQUIs 134 or 135 are operating. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.175.2	The Permittee shall comply with the requirements of COMG 12 whenever emissions are vented to TREA 79. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.175.3	The Permittee shall operate and maintain the electrostatic precipitator (ESP) in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. [Minn. R. 7007.0800, subp. 14]

Requirement number	Requirement and citation
5.175.4	Daily Monitoring: The Permittee shall physically verify the operation of the Continuous Parameter Monitoring System (CPMS) at least once each operating day to verify that it is working and recording properly. The Permittee shall maintain a written record of the daily verifications. [Minn. R. 7007.0800, subps. 4-5]
5.175.5	Data Collection: The Permittee shall maintain a continuous hard copy readout or computer disk file that shows the On/Off condition of the ESP at all times. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
5.175.6	Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.175.7	Monitoring Equipment: The Permittee must install and maintain a continuous parameter monitoring system (CPMS) for monitoring the ESP On/Off condition as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, whenever operation of the monitored control equipment is required. [Minn. R. 7007.0800, subps. 4-5]
5.175.8	Annual Inspections: At least once per calendar year, or more frequently if required by the manufacturer, the Permittee shall inspect the control equipment components not covered by the quarterly inspections. This includes, but is not limited to, components that are not subject to wear or plugging including structural components, housings, and hoods. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5]
5.175.9	Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - any recorded operating parameter is outside the required operating range (e.g., total power input); or - the ESP or any of its components are found during the inspections to need repair. Corrective actions shall return operation to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the ESP. The Permittee shall keep a record of the type and date of any corrective action taken for the ESP. [Minn. R. 7007.0800, subp. 14, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 5]
5.175.10	Pre-Filter and Cell Maintenance: The Permittee shall transport pre-filters and cells in leak-proof containers during cleaning, replacement, or performing other maintenance. The Permittee shall dispose of all lead-soiled materials including, but not limited to, dishwasher waste water, mop heads, rags, personal protective equipment (PPE), vacuum bags, and any other material soiled or otherwise in contact with lead as hazardous waste. [Minn. R. 7007.0800, subp. 2, Minn. R. ch. 7045]

6. Submittal/action requirements

This section lists most of the submittals required by this permit. Please note that some submittal requirements may appear in the Limits and Other Requirements section, or, if applicable, within a Compliance Schedule section.

Requirement number	Requirement and citation
TFAC 1	Water Gremlin Co

Requirement number	Requirement and citation
6.1.1	The Permittee must submit a semiannual deviations report: Due semiannually, by the 30th of January and July. The first semiannual report submitted by the Permittee must cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. Submit this on form DRF-2 (Deviation Reporting Form). If no deviations have occurred, submit the signed report certifying that there were no deviations. [Minn. R. 7007.0800, subp. 6(A), Minn. R. 7007.0800, subp. 6(B)(2)]
6.1.2	The Permittee must submit a compliance certification: Due annually, by the 31st of January (for the previous calendar year). Submit this on form CR-04 (Annual Compliance Certification Report). This report covers all deviations experienced during the calendar year. If no deviations have occurred, submit the signed report certifying that there were no deviations. [Minn. R. 7007.0800, subp. 6(A), Minn. R. 7007.0800, subp. 6(D)]
6.1.3	The Permittee shall submit an annual report by the 31st of January. The report shall be certified by the responsible official as defined in Minn. R. 7007.0100, subp. 21(A). The report shall describe the changes made at the facility during the previous calendar year using the latest MPCA application forms. The report shall include information for any new, modified, or replaced Subject Items in the form of a revised Attachment 2 - Subject Item Summary. The report shall include the changes in emissions of any pollutants that have been listed as chemicals of potential interest (COPI) based on the current Air Emission Risk Analysis (AERA) Guidance. The description of the change must include the change in emissions and identification of the emission source that changed. The report shall be submitted with the annual Compliance Certification required by this permit. As part of the Annual Report, the Permittee shall verify and certify that the facility has maintained minor source status for New Source Review. [Minn. R. 7007.0500, subp. 3, Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]
6.1.4	The Permittee shall submit a monthly Ambient Air Monitoring Report: due within 30 calendar days following the last day of each month after Initial Startup of the VOC monitors in accordance with the MPCA-approved Monitoring Plan. The report shall be certified by the responsible official as defined in Minn. R. 7007.0100, subp. 21(A). The VOC monitoring results shall be submitted to AQRoutineReport@pca.state.mn.us within 30 calendar days following the last day of the month following startup of the VOC monitors. [Minn. R. 7007.0800, subps. 5-6]
6.1.5	The Permittee shall submit excess emission/downtime report: Due 30 days after the end of each calendar quarter following permit issuance. Submit this on form DRF-1 (Excess Emissions Reporting) as amended. The EER shall indicate all periods of monitor bypass and exceedances of the limit including those allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions, as well as a summary of audit results and frequencies. If no excess emissions, downtime or bypasses occurred during the quarter, submit a signed report supplying the necessary monitor data needed to verify this. [Minn. R. 7017.1110, subps. 1-2]
6.1.6	The Permittee shall submit a notification of the actual Date of Initial Startup due 15 calendar days after Initial Startup Date of the VOC monitors, as described in the approved revised ambient air monitoring plan. [Minn. R. 7007.0800, subp. 6]
6.1.7	The Permittee shall submit a 1,2-(trans-) Dichloroethylene VOC Solvent Usage Report due within 30 calendar days following the last day of each month. The report shall be certified by the responsible official as defined in Minn. R. 7007.0100, subp. 21(A). The 1,2-(trans-) Dichloroethylene VOC solvent usage report shall include tons per month of 1,2-(trans-) Dichloroethylene containing solvent used and tons per month of 1,2-(trans-) Dichloroethylene VOC emissions from 1,2-(trans-) Dichloroethylene containing solvent used. The report shall include any audit of 1,2-(trans-) Dichloroethylene VOC solvent usage conducted during that month as a result of the 1,2-(trans-) Dichloroethylene Quarterly Purchase and Inventory Audit required elsewhere in this permit, including description of any corrections made to the record keeping process. The report shall be submitted to AQRoutineReport@pca.state.mn.us. This requirement to report on a monthly basis expires when MPCA approves discontinuation of VOC Ambient Air Monitoring. [Minn. R. 7007.0500, subp. 3, Minn.

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 328 of 672

Requirement number	Requirement and citation
	R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7007.0800, subps. 5-6, Minn. Stat. 116.07, subd. 9(2), Minn. Stat. 116.385, subd. 3]
6.1.8	The Permittee shall submit a VOC Continuous Emission Monitor Report due within 30 calendar days following the last day of each month. The report shall be certified by the responsible official as defined in Minn. R. 7007.0100, subp. 21(A). The VOC Continuous Emission Monitor System (CEMS, EQUI 176) report shall report daily emissions as measured ppmv-wet of Total Hydrocarbon Concentration as 1,2-(trans-) Dichloroethylene based on daily CEM readings. The report shall include any audit of 1,2-(trans-) Dichloroethylene VOC solvent usage conducted during that month as a result of the Reconciliation of Predicted Stack Concentration and CEMS Readings required elsewhere in this permit, including description of any corrections made to the record keeping process. The report shall be submitted to AQRoutineReport@pca.state.mn.us. This requirement to report on a monthly basis expires when MPCA approves discontinuation of VOC Ambient Air Monitoring. [Minn. R. 7007.0500, subp. 3, Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. R. 7007.0800, subps. 5-6, Minn. Stat. 116.07, subd. 9(2), Minn. Stat. 116.385, subd. 3]
COMG 1	VOC and 1,2 (trans) Dichloroethylene Limits and VOC Coater, Water-Based Coater, UV Coater, and Solvent Distillation Operation Requirements.
6.2.1	The Permittee shall submit an annual report by the 31st of January. The report shall document the VOC 365-day rolling sum calculations for the previous calendar year. The report shall be submitted with the annual Compliance Certification required by this permit. As part of the Annual Report, the Permittee shall verify and certify that the Facility has maintained minor source status for PSD and Part 70. [Minn. R. 7007.0800, subp. 2(A)]
6.2.2	The Permittee shall submit a notification: Due 30 calendar days before addition, replacement, or conversion of coaters authorized under COMG 1. The notification shall be certified by the responsible official as defined in Minn. R. 7007.0100, subp. 21(A). The notification shall include the planned date for beginning of operations and the following forms: 1) Coaters not required to comply with COMG 5: MPCA forms GI-02, GI-03, GI-04 and GI-05B 2) Coaters required to comply with COMG 5: MPCA forms GI-05B and GI-05A, if control equipment is required under COMG 2, COMG 4 or COMG 8. [Minn. R. 7007.0500, subp. 3, Minn. R. 7007.0800, subps. 5-6]
6.2.3	The Permittee shall submit an annual report by the 31st of January. The report shall document the 1,2-(trans-) Dichloroethylene VOC 365-day rolling sum calculations for the previous calendar year. The report shall include the results of the 1,2-(trans-) Dichloroethylene VOC Quarterly Purchase Audits required elsewhere in this permit. The report shall be certified by the responsible official as defined in Minn. R. 7007.0100, subp. 21(A). The report shall be submitted with the annual Compliance Certification required by this permit. As part of the Annual Report, the Permittee shall verify and certify that the Facility has maintained minor source status for PSD and Part 70. [Minn. R. 7007.0500, subp. 3, Minn. R. 7007.0800, subp. 2]
6.2.4	The Permittee shall submit a notification due 30 calendar days before replacement of control equipment authorized under COMG 11. The notification shall be certified by the responsible official as defined in Minn. R. 7007.0100, subp. 21(A). The notification shall include the planned date for beginning of operations and form GI-05A. [Minn. R. 7007.0500, subp. 3, Minn. R. 7007.0800, subps. 5-6]
6.2.5	The Permittee shall submit a notification due 30 calendar days before replacement of control equipment authorized under COMG 12. The notification shall be certified by the responsible official as defined in Minn. R. 7007.0100, subp. 21(A). The notification shall include the planned date for beginning of operations and form GI-05A. [Minn. R. 7007.0500, subp. 3, Minn. R. 7007.0800, subps. 5-6]
6.2.6	The Permittee shall submit a notification due 30 calendar days before replacement of control equipment authorized under COMG 14. The notification shall be certified by the responsible official as

Commented [A42]: A CEMS is not necessary at the facility. Monthly reports are also not necessary. The inventory audits and reports should suffice to show compliance and recordkeeping accuracy. See the Company's Comment Letter for more details.

Requirement number	Requirement and citation
	defined in Minn. R. 7007.0100, subp. 21(A). The notification shall include the planned date for beginning of operations and form GI-05A. [Minn. R. 7007.0500, subp. 3, Minn. R. 7007.0800, subps. 5-6]
COMG 5	Permanent Total Enclosure Requirements: Coating Rooms
6.3.1	Weekly Reporting: The Permittee shall submit a weekly report due by 4:30pm on Friday each week that includes pressure drop readings, the door status, and daily alarm verification for each coating room in COMG 5. The report shall be certified by the responsible official as defined in Minn. R. 7007.0100, subp. 21(A). The report shall be submitted to AQRoutineReport@pca.state.mn.us and must include any deviation from the approved minimum pressure drop, and/or door status, the actions taken to evaluate the reasons for the deviation, and the corrective actions taken to resolve the deviations. [Minn. R. 7007.0500, subp. 3, Minn. R. 7007.0800, subp. 2(A) & (B)]
6.3.2	<p>The Permittee shall conduct a performance test due within 30 days of permit issuance and every 12 months thereafter to determine if each coating room in COMG 5 is a permanent total enclosure that meets the criteria of Method 204 of appendix M to 40 CFR pt. 51.</p> <p>The first test is due by the date specified above and all subsequent tests shall be completed every 12 months thereafter by the due date (month and day) and as described below. The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Method 204, or other method approved by MPCA in the performance test plan approval.</p> <p>Testing conducted during the 60 days prior to the performance test due date will not reset the test due date for future testing as required by this permit or within a Notice of Compliance letter.</p> <p>Testing conducted more than 60 days prior to the performance test due date satisfies this test due date requirement but will reset future performance test due dates based on the performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.3.3	<p>The Permittee shall submit a report due monthly by the 15th of every month. The report shall be certified by the responsible official as defined in Minn. R. 7007.0100, subp. 21(A). The report shall be submitted to AQRoutineReport@pca.state.mn.us and must contain the following:</p> <p>1) Floor degradation discovered in the past month; and</p> <p>2) Description of all corrective actions. [Minn. R. 7007.0500, subp. 3, Minn. R. 7007.0800, subp. 2(A) & (B)]</p>
COMG 14	Nederman Filters - Spray Coaters
6.4.1	The Permittee shall submit a notification due 30 calendar days after Permit Issuance Date for control equipment authorized for operation under COMG 14. The notification shall be certified by the responsible official as defined in Minn. R. 7007.0100, subp. 21(A). The notification shall include the initial startup date, form GI-05A, and a process flow diagram. [Minn. R. 7007.0500, subp. 3, Minn. R. 7007.0800, subps. 5-6]
EQUI 120	Emergency Generator Engine
6.5.1	The Permittee shall submit a notification of anticipated date for conducting opacity observations: Due 30 calendar days before Opacity Observation Date. The report shall be certified by the responsible official as defined in Minn. R. 7007.0100, subp. 21(A). [40 CFR 60.7(a)(6), Minn. R. 7007.0500, subp. 3, Minn. R. 7019.0100, subp. 1]
6.5.2	The Permittee shall submit notification of the date construction of replacement began: Due 60 calendar days before Date of Construction or Replacement (or as soon as practicable). The report shall be certified by the responsible official as defined in Minn. R. 7007.0100, subp. 21(A). Submit the information specified in 40 CFR Section 60.15(d)(1) through (7).

Requirement number	Requirement and citation
	The notification shall be submitted electronically on Form CS-02. [40 CFR 60.15(d), Minn. R. 7007.0500, subp. 3, Minn. R. 7011.0050]
EQUI 176	VOC CEMS (STRU 73)
6.6.1	The Permittee shall submit start-up notification: Due 10 working days after Startup of Monitor Date. The report shall be certified by the responsible official as defined in Minn. R. 7007.0100, subp. 21(A). The notification shall be submitted electronically on Form CS-02. [Minn. R. 7007.0500, subp. 3, Minn. R. 7007.0800, subp. 2(A), Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. Stat. 116.07, subd. 9(2), and Minn. Stat. 116.385, subd. 3]
6.6.2	The Permittee shall conduct CEMS cylinder gas audit (CGA): Due by the end of every second QA operating quarter (calendar quarter in which there are at least 168-unit operating hours) except that a CGA is not required during any quarter in which a RATA is performed. The initial CGA must be performed within 180 days following certification of the CEMS. The CGAs shall be conducted according to the procedures outlined in Minn. R. 7017.1170, subp 4a(A). If the monitored emission unit is not in operation on the CGA due date, the owner or operator has a grace period of 168 operating hours to perform the CGA. [Minn. R. 7017.1170, subp. 4a, Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. Stat. 116.07, subd. 9(2), and Minn. Stat. 116.385, subd. 3]
6.6.3	The Permittee shall conduct a relative accuracy test audit: Due by the end of every fourth QA operating quarter (calendar quarter in which there are at least 168-unit operating hours). RATAs shall be conducted, and frequency may be reduced according to the procedures outlined in Minn. R. 7017.1170, subp. 5a. If the monitored emission unit is not in operation on the RATA due date, the owner or operator has a grace period of 720 operating hours to perform the RATA. [Minn. R. 7017.1170, subp. 5a, Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. Stat. 116.07, subd. 9(2), and Minn. Stat. 116.385, subd. 3]
6.6.4	Installation Notification: due 60 days before installing the continuous emissions monitoring system. The notification shall include plans and drawings of the system. Additionally, the notification shall include manufacture, model, parameter, and serial numbers of the continuous emissions monitoring system. [Minn. R. 7017.1040, subp. 1, Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7007.0800, subps. 4(C) and (D), Minn. Stat. 116.07, subd. 9(2), and Minn. Stat. 116.385, subd. 3]
STRU 1	Smog Hog #15 Stack
6.7.1	<p>Particulate Matter: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 11.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p>

Requirement number	Requirement and citation
	<p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.7.2	<p>PM < 10 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 11.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.7.3	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 11.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in</p>

Requirement number	Requirement and citation
	<p>Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.7.4	<p>Lead: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 11.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.7.5	<p>Particulate Matter: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p>

Requirement number	Requirement and citation
	<p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.7.6	<p>PM < 10 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.7.7	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p>

Requirement number	Requirement and citation
	<p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.7.8	<p>Lead: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. (A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 15	Smog Hog #1 Stack
6.8.1	<p>PM < 10 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date</p>

Requirement number	Requirement and citation
	<p>for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.8.2	<p>Particulate Matter: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.8.3	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p>

Requirement number	Requirement and citation
	<p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.8.4	<p>Lead: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.8.5	<p>Particulate Matter: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this</p>

Requirement number	Requirement and citation
	test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.8.6	<p>PM < 10 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.8.7	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 338 of 672

Requirement number	Requirement and citation
	performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.8.8	<p>Lead: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. (A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 16	Smog Hog #2 Stack
6.9.1	<p>PM < 10 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Requirement number	Requirement and citation
	7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.9.2	<p>Particulate Matter: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.9.3	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent</p>

Requirement number	Requirement and citation
	performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.9.4	<p>Lead: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.9.5	<p>Particulate Matter: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 341 of 672

Requirement number	Requirement and citation
6.9.6	<p>7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>PM < 10 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.9.7	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 342 of 672

Requirement number	Requirement and citation
	7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a) , To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.9.8	<p>Lead: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. (A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 17	Smog Hog #3 Stack
6.10.1	<p>PM < 10 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Requirement number	Requirement and citation
	7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.10.2	<p>Particulate Matter: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.10.3	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent</p>

Requirement number	Requirement and citation
	performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.10.4	<p>Lead: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.10.5	<p>Particulate Matter: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Requirement number	Requirement and citation
6.10.6	<p data-bbox="293 512 1071 554">7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p data-bbox="293 560 1071 630">PM < 10 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p data-bbox="293 653 1071 743">The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p data-bbox="293 766 1071 835">If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p data-bbox="293 858 1071 972">The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p data-bbox="293 995 1071 1129">Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.10.7	<p data-bbox="293 1140 1071 1209">PM < 2.5 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p data-bbox="293 1232 1071 1323">The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p data-bbox="293 1346 1071 1415">If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p data-bbox="293 1438 1071 1551">The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p data-bbox="293 1575 1071 1661">Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 346 of 672

Requirement number	Requirement and citation
	7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.10.8	<p>Lead: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. (A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 20	Smog Hog #6 Stack
6.11.1	<p>Particulate Matter: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Requirement number	Requirement and citation
6.11.2	<p>7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>PM < 10 micron: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.11.3	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent</p>

Requirement number	Requirement and citation
6.11.4	<p>performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>Lead: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.11.5	<p>Particulate Matter: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 349 of 672

Requirement number	Requirement and citation
6.11.6	<p data-bbox="293 512 1071 554">7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p data-bbox="293 562 1071 630">PM < 10 micron: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p data-bbox="293 653 1071 743">The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p data-bbox="293 766 1071 833">If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p data-bbox="293 856 1071 972">The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p data-bbox="293 995 1071 1129">Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.11.7	<p data-bbox="293 1140 1071 1207">PM < 2.5 micron: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p data-bbox="293 1230 1071 1320">The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p data-bbox="293 1344 1071 1411">If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p data-bbox="293 1434 1071 1549">The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p data-bbox="293 1572 1071 1661">Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 350 of 672

Requirement number	Requirement and citation
6.11.8	<p>7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>Lead: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 23	Smog Hog #9 Stack
6.12.1	<p>Particulate Matter: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Requirement number	Requirement and citation
6.12.2	<p>7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>PM < 10 micron: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.12.3	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent</p>

Requirement number	Requirement and citation
	performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.12.4	<p>Lead: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.12.5	<p>Particulate Matter: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 353 of 672

Requirement number	Requirement and citation
6.12.6	<p data-bbox="293 512 1071 554">7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p data-bbox="293 560 1071 630">PM < 10 micron: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p data-bbox="293 653 1071 743">The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p data-bbox="293 766 1071 835">If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p data-bbox="293 858 1071 972">The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p data-bbox="293 995 1071 1129">Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.12.7	<p data-bbox="293 1140 1071 1209">PM < 2.5 micron: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p data-bbox="293 1232 1071 1323">The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p data-bbox="293 1346 1071 1415">If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p data-bbox="293 1438 1071 1551">The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p data-bbox="293 1575 1071 1661">Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 354 of 672

Requirement number	Requirement and citation
	7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.12.8	<p>Lead: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 24	Smog Hog #10 Stack
6.13.1	<p>Particulate Matter: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Requirement number	Requirement and citation
6.13.2	<p>7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>PM < 10 micron: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.13.3	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent</p>

Requirement number	Requirement and citation
	performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.13.4	<p>Lead: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.13.5	<p>Particulate Matter: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Requirement number	Requirement and citation
6.13.6	<p data-bbox="293 512 1071 554">7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p data-bbox="293 562 1071 630">PM < 10 micron: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p data-bbox="293 653 1071 743">The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p data-bbox="293 766 1071 833">If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p data-bbox="293 856 1071 972">The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p data-bbox="293 995 1071 1129">Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.13.7	<p data-bbox="293 1140 1071 1207">PM < 2.5 micron: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p data-bbox="293 1230 1071 1320">The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p data-bbox="293 1344 1071 1411">If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p data-bbox="293 1434 1071 1549">The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p data-bbox="293 1572 1071 1661">Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 358 of 672

Requirement number	Requirement and citation
	7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.13.8	<p>Lead: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 25	Smog Hog #11 Stack
6.14.1	<p>Particulate Matter: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Requirement number	Requirement and citation
6.14.2	<p>7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>PM < 10 micron: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.14.3	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent</p>

Requirement number	Requirement and citation
	<p>performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.14.4	<p>Lead: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.14.5	<p>Particulate Matter: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Requirement number	Requirement and citation
6.14.6	<p data-bbox="293 512 1071 554">7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p data-bbox="293 562 1071 630">PM < 10 micron: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p data-bbox="293 653 1071 743">The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p data-bbox="293 766 1071 833">If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p data-bbox="293 856 1071 972">The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p data-bbox="293 995 1071 1129">Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.14.7	<p data-bbox="293 1140 1071 1207">PM < 2.5 micron: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p data-bbox="293 1230 1071 1320">The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p data-bbox="293 1344 1071 1411">If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p data-bbox="293 1434 1071 1549">The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p data-bbox="293 1572 1071 1661">Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 362 of 672

Requirement number	Requirement and citation
	7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.14.8	<p>Lead: The Permittee shall conduct a performance test due before 24 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 26	Smog Hog #12 Stack
6.15.1	<p>Particulate Matter: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Requirement number	Requirement and citation
6.15.2	<p>7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>PM < 10 micron: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.15.3	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 180 days following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent</p>

Requirement number	Requirement and citation
	performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.15.4	<p>Lead: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.15.5	<p>Particulate Matter: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 365 of 672

Requirement number	Requirement and citation
6.15.6	<p data-bbox="293 512 1071 554">7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p data-bbox="293 562 1071 630">PM < 10 micron: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p data-bbox="293 655 1071 743">The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p data-bbox="293 768 1071 835">If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p data-bbox="293 861 1071 970">The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p data-bbox="293 995 1071 1129">Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.15.7	<p data-bbox="293 1140 1071 1207">PM < 2.5 micron: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p data-bbox="293 1232 1071 1320">The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p data-bbox="293 1346 1071 1413">If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p data-bbox="293 1438 1071 1547">The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p data-bbox="293 1572 1071 1661">Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 366 of 672

Requirement number	Requirement and citation
	7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.15.8	<p>Lead: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 30	Smog Hog #16 Stack
6.16.1	<p>Particulate Matter: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 367 of 672

Requirement number	Requirement and citation
6.16.2	<p>7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>PM < 10 micron: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.16.3	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent</p>

Requirement number	Requirement and citation
	performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.16.4	<p>Lead: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.16.5	<p>Particulate Matter: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Requirement number	Requirement and citation
6.16.6	<p>7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>PM < 10 micron: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.16.7	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 370 of 672

Requirement number	Requirement and citation
	7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.16.8	<p>Lead: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 31	Smog Hog #17 Stack
6.17.1	<p>Particulate Matter: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 371 of 672

Requirement number	Requirement and citation
6.17.2	<p>7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>PM < 10 micron: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.17.3	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent</p>

Requirement number	Requirement and citation
6.17.4	<p>performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>Lead: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.17.5	<p>Particulate Matter: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Requirement number	Requirement and citation
6.17.6	<p data-bbox="293 512 1071 552">7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p data-bbox="293 562 1071 630">PM < 10 micron: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p data-bbox="293 653 1071 743">The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p data-bbox="293 766 1071 833">If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p data-bbox="293 856 1071 972">The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p data-bbox="293 995 1071 1129">Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.17.7	<p data-bbox="293 1140 1071 1207">PM < 2.5 micron: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p data-bbox="293 1230 1071 1320">The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p data-bbox="293 1344 1071 1411">If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p data-bbox="293 1434 1071 1549">The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p data-bbox="293 1572 1071 1661">Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 374 of 672

Requirement number	Requirement and citation
	7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.17.8	<p>Lead: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 32	Smog Hog #18 Stack
6.18.1	<p>Particulate Matter: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 375 of 672

Requirement number	Requirement and citation
6.18.2	<p>7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>PM < 10 micron: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.18.3	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent</p>

Requirement number	Requirement and citation
6.18.4	<p>performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>Lead: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.18.5	<p>Particulate Matter: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Requirement number	Requirement and citation
6.18.6	<p data-bbox="293 512 1071 554">7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p data-bbox="293 560 1071 630">PM < 10 micron: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p data-bbox="293 653 1071 743">The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p data-bbox="293 766 1071 835">If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p data-bbox="293 858 1071 972">The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p data-bbox="293 995 1071 1129">Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.18.7	<p data-bbox="293 1140 1071 1209">PM < 2.5 micron: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p data-bbox="293 1232 1071 1323">The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p data-bbox="293 1346 1071 1415">If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p data-bbox="293 1438 1071 1551">The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p data-bbox="293 1575 1071 1661">Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 378 of 672

Requirement number	Requirement and citation
	7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.18.8	<p>Lead: The Permittee shall conduct a performance test due before 36 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 33	Smog Hog #19 Stack
6.19.1	<p>Particulate Matter: The Permittee shall conduct a performance test due before 48 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Requirement number	Requirement and citation
6.19.2	<p>7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>PM < 10 micron: The Permittee shall conduct a performance test due before 48 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.19.3	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 48 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent</p>

Requirement number	Requirement and citation
	performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.19.4	<p>Lead: The Permittee shall conduct a performance test due before 48 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.19.5	<p>Particulate Matter: The Permittee shall conduct a performance test due before 48 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Requirement number	Requirement and citation
6.19.6	<p>7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>PM < 10 micron: The Permittee shall conduct a performance test due before 48 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.19.7	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 48 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 382 of 672

Requirement number	Requirement and citation
	7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.19.8	<p>Lead: The Permittee shall conduct a performance test due before 48 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 34	Smog Hog #20 Stack
6.20.1	<p>Particulate Matter: The Permittee shall conduct a performance test due before 48 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Requirement number	Requirement and citation
	7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.20.2	<p>PM < 10 micron: The Permittee shall conduct a performance test due before 48 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.20.3	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 48 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent</p>

Requirement number	Requirement and citation
	performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.20.4	<p>Lead: The Permittee shall conduct a performance test due before 48 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.20.5	<p>Particulate Matter: The Permittee shall conduct a performance test due before 48 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 385 of 672

Requirement number	Requirement and citation
6.20.6	<p>7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p> <p>PM < 10 micron: The Permittee shall conduct a performance test due before 48 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.20.7	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 48 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R.</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 386 of 672

Requirement number	Requirement and citation
	7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]
6.20.8	<p>Lead: The Permittee shall conduct a performance test due before 48 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 73	Battery Terminal Post Coater Stack
6.21.1	<p>PM < 10 micron: The Permittee shall conduct a performance test due within 180 days following issuance of Permit No. 12300341-101 and every 60 months thereafter to verify compliance with the PM10 emission limit of 0.01012 pounds per hour daily average. This test shall be conducted concurrently with the PM2.5 performance test. The permittee has the option to test each type of spray coater for uncontrolled emissions, controlled emissions, and control efficiency of the associated control equipment instead of testing (controlled) spray coater emissions from STRU 73 by following the requirements in Appendix E.</p> <p>If the test results of controlled emissions measured at STRU 73 are above detection limits, the Permittee shall calculate emissions of all units operating during the test using the methods described elsewhere in this permit. The total emissions calculated in this manner shall be compared to the measured emissions during the test. If the calculated emissions are equal or higher than the measured emissions, the Permittee will continue to use the emission calculations prescribed in this permit. If measured emissions are higher than calculated emissions, the Permittee must submit a plan to revise emission factors within 30 days of receiving the Notice of Compliance.</p> <p>If the test results of controlled emissions measured at STRU 73 or from any spray coater individually tested are below detection limits, the permittee shall continue to use the approved control efficiencies in Appendix B.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p>

Requirement number	Requirement and citation
	<p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing.</p> <p>Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.21.2	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due within 180 days following issuance of Permit No. 12300341-101 and every 60 months thereafter to measure emissions to verify compliance with the PM2.5 emission limit of 0.01012 pounds per hour daily average. This shall be conducted concurrently with the PM10 performance test. The Permittee has the option to test each type of spray coater for uncontrolled emissions, controlled emissions, and control efficiency of the associated control equipment instead of testing (controlled) spray coater emissions from STRU 73 by following the requirements in Appendix E.</p> <p>If the test results of controlled emissions measured at STRU 73 are above detection limits, the Permittee shall calculate emissions of all units operating during the test using the methods described elsewhere in this permit. The total emissions calculated in this manner shall be compared to the measured emissions during the test. If the calculated emissions are equal or higher than the measured emissions, the Permittee will continue to use the emission calculations prescribed in this permit. If measured emissions are higher than calculated emissions, the Permittee must submit a plan to revise emission factors within 30 days of receiving the Notice of Compliance.</p> <p>If the test results of controlled emissions measured at STRU 73 or from any individual spray coater are below detection limits, the permittee shall continue to use the approved control efficiencies listed in Appendix B.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval.</p>

Requirement number	Requirement and citation
	<p>The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 74	Smog Hog #5 Stack
6.22.1	<p>Particulate Matter: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.22.2	<p>PM < 10 micron: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference</p>

Requirement number	Requirement and citation
	<p>Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.22.3	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0080, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.22.4	<p>Lead: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005,</p>

Requirement number	Requirement and citation
	<p>subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.22.5	<p>Particulate Matter: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.22.6	<p>PM < 10 micron: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in</p>

Requirement number	Requirement and citation
	<p>Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2A(& 2(B)), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.22.7	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.22.8	<p>Lead: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p>

Requirement number	Requirement and citation
	<p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
STRU 75	Smog Hog #8 Stack
6.23.1	<p>Particulate Matter: Particulate Matter: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.23.2	<p>PM < 10 micron: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p>

Requirement number	Requirement and citation
	<p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.23.3	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A)& 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.23.4	<p>Lead: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to verify the emission factor described in Appendix D, and determine overall control efficiency of control equipment train under COMG 12.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p>

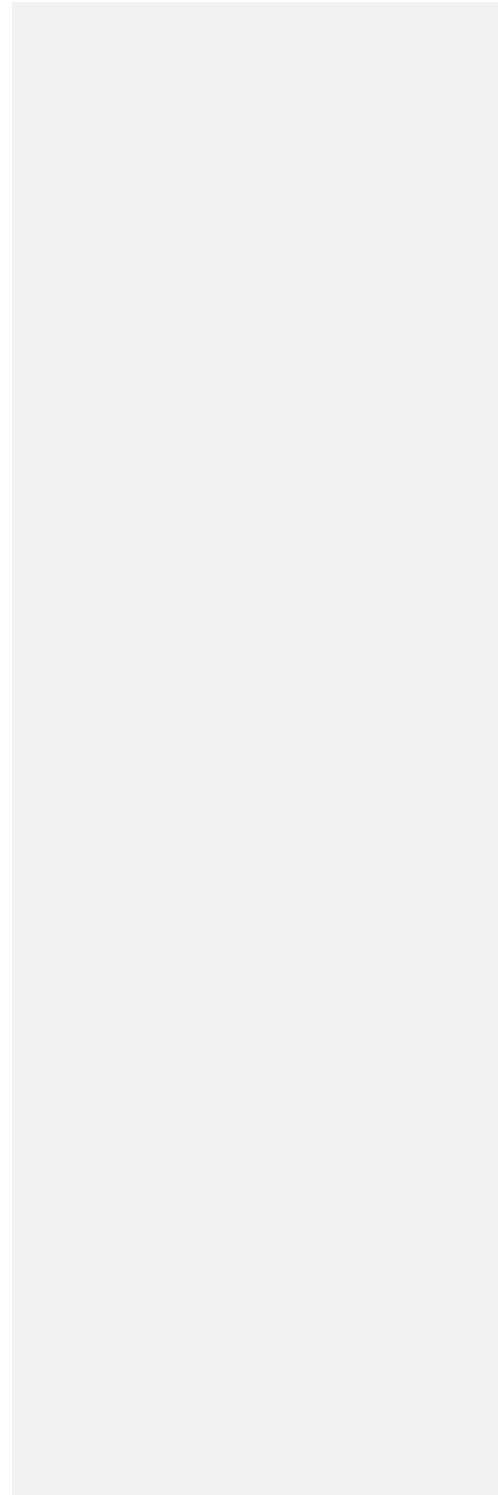
Requirement number	Requirement and citation
	<p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]</p>
6.23.5	<p>Particulate Matter: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 5 and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.23.6	<p>PM < 10 micron: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date</p>

Requirement number	Requirement and citation
	<p>for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.23.7	<p>PM < 2.5 micron: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Methods 201A and 202, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent performance test date. [Minn. R. 7007.0800, subps. 2(A) & 2(B), Minn. R. 7009.0020-0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a), To avoid major source under 40 CFR 70.2 & Minn. R. 7007.0200]</p>
6.23.8	<p>Lead: The Permittee shall conduct a performance test due before 12 months following issuance of Permit No. 12300341-101 and at a minimum every 60 months thereafter to measure emissions, in pounds per hour.</p> <p>The Commissioner will set the subsequent test frequency as stated in a Notice of Compliance (NOC) or Notice of Performance Test Verification (NOPTV) letter with review of the initial performance test. Subsequent tests shall be completed no less than every 60-months by the due date (month and day) based on the initial test date or more frequently as stated in the NOC/NOPTV letter.</p> <p>If the Commissioner sets a test frequency at less than every 60 months, the Permittee must apply for an administrative amendment to incorporate the prescribed test frequency into the permit. A major amendment is required to reduce the test frequency once set in the permit.</p> <p>The performance test shall be conducted at worst-case conditions defined at Minn. R. 7017.2005, subp. 8 or at the operating conditions described at Minn. R. 7017.2025, subp. 2, using EPA Reference Method 12, or other method approved by MPCA in the performance test plan approval. The operating conditions during the test, and required recordkeeping and reporting are described in Appendix E.</p> <p>Testing conducted during the 60 days prior to a performance test due date will not reset the due date for future testing. Testing conducted more than 60 days prior to the specified due date satisfies this test due date requirement but will reset future performance test due dates based on the most recent</p>

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 396 of 672

Requirement number	Requirement and citation
	performance test date. [Minn. R. 7007.0800, subp. 2(A) & (B), Minn. R. 7009.0020-7009.0090, Minn. R. 7017.2020, subp. 1, Minn. Stat. 116.07, subd. 4a(a)]



Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 397 of 672

7. Appendices

Appendix A. Insignificant activities and general applicable requirements

The table below lists the insignificant activities that are currently at the Facility and their associated general applicable requirements.

Minn. R.	Rule description of the activity	General applicable requirement
Minn. R. 7007.1300, subp. 3(E)	Brazing, soldering, torch-cutting, or welding equipment	PM, variable depending on airflow Opacity <= 20% (Minn. R. 7011.0710/0715)
Minn. R. 7007.1300, subp. 3(F)	Individual units with potential emissions less than 2000 lb/year of certain pollutants	PM, variable depending on airflow Opacity <= 20% (Minn. R. 7011.0710/0715)

Appendix B. Maximum material content, emissions calculations, and analytical methods for coating operations

1) Maximum Material Content

Table B.1 below specifies the maximum allowable volatile organic compound (VOC), *trans*-(1,2)-Dichloroethylene (t-DCE), and solids content of the coatings used at the facility. The listed maximum coating usage, VOC content shall be used in calculations that determine worst-case VOC emissions. The maximum coating usage and solids content for VOC and water-based coatings is listed in Table B.1 and is limited to this content based on dispersion modeling. The actual solids content of the coatings applied on any given day will be recorded and shall be used to calculate particulate matter (PM) emissions from coaters that apply coating using sprayers. Particulate emissions from UV coatings will assume the coating is 100 percent solids unless an alternative emission factor is developed based on source testing. The VOC solvent, water-based coating, and ultraviolet (UV) cured coating allowed by Air Permit No. 12300341-101 for coating operations is FluoSolv WS (VOC), Tacolyn 3570 (water-based), and WGCS 300 (UV), respectively. The minimum allowable transfer efficiency for the spray application of VOC solvent and water-based coating is limited to 65 percent transfer efficiency.

Table B.1. Coater description, and maximum material content and processing rates at the time of permit issuance

Emission Unit ID	Emission Unit Description	Application	Coating Type	Maximum VOC Content ^[1] (wt. %)	Maximum t-DCE Content (wt. %)	Maximum Solids Content ^[2] (wt. %)	Maximum Solvent Usage (lb/hr)	Maximum Coating Usage ^[3] (lb/hr)
EQUI 82	Battery Terminal Post Coater 6	Spray	UV	0.44	0	100	0	0.82
EQUI 84	Battery Terminal Post Coater 9	Spray	UV	0.44	0	100	0	1.32
EQUI 85	Battery Terminal Post Coater 10	Drip	Water-based	0.001	0	21	22.06	27.92
EQUI 87	Battery Terminal Post Coater 12	Dip	VOC	90	90	21	13.25	16.77
EQUI 88	Battery Terminal Post Coater 15	Drip/Spray	Water-based/ VOC	90	90	21	4.73	5.44
EQUI 89	Battery Terminal Post Coater 17	Dip	Water-based	0.001	0	21	19.40	24.55
EQUI 92	Battery Terminal Post Coater 20	Dip	Water-based	0.001	0	21	19.69	24.92
EQUI 93	Battery Terminal Post Coater 21	Dip	Water-based/ VOC	90	90	21	66.26	83.88
EQUI 94	Battery Terminal Post Coater 22	Drip	Water-based/ VOC	0.001	0	21	15.03	19.03
EQUI 95	Battery Terminal Post Coater 23	Spray	Water-based/ VOC	90	90	21	2.36	2.71
EQUI 97	Battery Terminal Post Coater 25	Dip	Water-based	0.001	0	21	5.25	6.65
EQUI 98	Battery Terminal Post Coater 26	Dip	Water-based/ VOC	90	90	21	2.03	2.57
EQUI 99	Battery Terminal Post Coater 27	Dip	Water-based/ VOC	90	90	21	17.46	22.10
EQUI 100	Battery Terminal Post Coater 28	Drip	Water-based/ VOC	90	90	21	3.85	4.87
EQUI 116	Battery Terminal Post Coater 30	Dip	Water-based	0.001	0	21	16.28	20.61

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 399 of 672

Emission Unit ID	Emission Unit Description	Application	Coating Type	Maximum VOC Content ^[1] (wt. %)	Maximum t-DCE Content (wt. %)	Maximum Solids Content ^[2] (wt. %)	Maximum Solvent Usage (lb/hr)	Maximum Coating Usage ^[3] (lb/hr)
EQUI 117	South Building R&D Coater	Spray	UV	0.44	0	100	0	0.41
EQUI 172	Battery Terminal Post Coater 29	Dip	Water-based	0.001	0	21	43.50	55.06
EQUI 219	Battery Terminal Post Coater 33	Spray	UV	0.44	0	100	0	7.92
EQUI 220	Battery Terminal Post Coater 34	Spray	UV	0.44	0	100	0	7.92
EQUI 233	Battery Terminal Post Coater 19	Dip	Water-based	0.001	0	21	1.71	2.16
EQUI 240	Prototype Coater	Spray	UV	0.44	0	100	0	0.41

^[1] The VOC content of VOC solvent coating is equal to the highest VOC content described in the FluoSolv WS safety data sheet (SDS). The calculated VOC content of the water-based coating includes the total VOC contribution from Tacolyn 3570. The VOC content of emissions due to off-gassing from UV-cured coating was determined from the August 12, 2021 performance test of Coater 6 (EQUI 82).

^[2] The maximum coating solids content is limited based on what was assumed in potential to emit calculations for PM/PM₁₀/PM_{2.5} from spray coaters. Since dip and drip coating application methods do not generate over-spray, no particulate emissions are expected from these coaters.

^[3] Maximum coating usage for solvent and water-based coaters is calculated from the maximum solvent usage and the maximum solids content allowed by the permit as follows:

$$\text{Maximum Coating Usage (lb/hr)} = [\text{Maximum Solvent Usage (lb/hr)}] / [1 - ((\text{Maximum Solids Content (wt. \%)} / 100)]$$

Maximum coating usage for UV coaters was determined by a series of three spray tests in which the highest throughput was used. The highest throughput used is assumed to be the same in each nozzle and the solids content of WGCS 300 is 100 percent (no solvent). Therefore, the maximum coating usage for UV coaters is calculated as follows:

$$\text{Maximum Coating Usage (lb/hr)} = [\text{Highest Single Nozzle Spray Rate (lb/hr)}] \times [\text{Maximum Number of Nozzles}]$$

2) Coating Emissions Calculations for VOC, *trans*-(1,2)-Dichloroethylene, and PM/PM₁₀/PM_{2.5}

Default factors to be used in emission calculations are listed as follows, unless an alternative value is approved using test methods defined in Section 3 below:

- a) *trans*-(1,2)-Dichloroethylene emissions from FluoSolv WS shall assume the weight percent of *trans*-(1,2)-Dichloroethylene is 90 percent (0.90 mass fraction), which is equal to the VOC fraction unless the exact *trans*-(1,2)-Dichloroethylene content is made public.
- b) *trans*-(1,2)-Dichloroethylene emissions from other approved formulation that contains *trans*-(1,2)-Dichloroethylene shall assume the weight percent of VOC is equal to the weight percent of *trans*-(1,2)-Dichloroethylene, unless the exact *trans*-(1,2)-Dichloroethylene content is made public. If the VOC content in the SDS is given as a range, the highest VOC content in the range shall be used.
- c) *trans*-(1,2)-Dichloroethylene fugitive emissions from Chemical Storage Room = 0.003104 tons per day. This number represents the total daily emissions (statistical average) from the chemical storage room and shall be used for the calculation of emissions against the VOC and *trans*-(1,2)-Dichloroethylene permit limits.

- d) Particulate matter (PM₁₀/PM_{2.5}) emissions from spray VOC and water-based coatings shall be calculated using the formulas specified in the permit based on the actual solids content of the applied coating(s).
- e) VOC emission calculations from water-based coatings shall assume the following emission factor:
 - i) VOC = 0.0057 lb VOC/lb coating
 - ii) Revised emission factors may be used upon approval of test results based on actual operation.
- f) VOC emission calculations from degassing of UV coatings shall assume the following emission factor:
 - i) VOC = 0.0044 lb VOC/lb coating
 - ii) Revised emission factors may be used upon approval of test results based on actual operation.
- g) Particulate matter (PM₁₀/PM_{2.5}) emissions from spray UV coatings shall assume the following emission factors:
 - i) PM₁₀ = 0.0024 lb PM₁₀/lb coating
 - ii) PM_{2.5} = 0.0024 lb PM_{2.5}/lb coating
 - iii) Revised emission factors may be used upon approval of test results based on actual operation.

3) Analytical Methods

When manufacturer's data is not used for purchased material, and to determine content in recovered and waste material, the Permittee may test the coatings to change the default emission factors listed in Section 2 by following the testing requirements in Minn. R. 7017.2001 through 7017.2060 and the following:

- a) Total VOC mass fraction in VOC-containing material
 - i) VOC solvent coatings: the Permittee may use Method 24 in Appendix A to 40 CFR Part 60 to determine the VOC mass fraction and use that value as a substitute for the default VOC mass fraction in Section 2.
 - ii) Water-based coatings: the Permittee may use EPA Method 8260B to determine the mass fraction of VOCs in the water-based coating.
 - iii) UV coatings: The Permittee may use ASTM D5403-93 for reactive coating material such as UV coatings in which some of the volatile content react to form solids and are not emitted to the atmosphere. The Permittee may use that value as a substitute for the default VOC mass fraction in Section 2.
 - iv) Other Methods approved by MPCA may be used pursuant to Minn. R. 7017.2050.
 - v) If VOC results are below detection levels, the Permittee shall use the method detection level used for the analysis to report content value and use for emission calculations.
- b) Determination of total VOC and *trans*-(1,2)-Dichloroethylene mass fraction in waste coating material
 - i) Use EPA method 311 in Appendix A to 40 CFR part 63.
 - ii) Other Methods approved by MPCA may be used pursuant to Minn. R. 7017.2050.
 - iii) If *trans*-(1,2)-Dichloroethylene results are below detection levels, the analytical detection level must be used to report the VOC content value to be used in emission calculations.
 - iv) This analysis shall be conducted for every batch of waste to be shipped off-site if being used in for calculation of *trans*-(1,2)-Dichloroethylene emissions. A composite sample may be used to represent the composition of every batch to be shipped as waste. After a minimum of 30 months of testing shipments, the Permittee may submit for approval a proposal to define the conditions under which subsequent shipments do not need to be re-tested. The proposal must be supported with actual test data of shipment, the associated past operating records and projections of future operating conditions.
- c) Determination of total VOC and *trans*-(1,2)-Dichloroethylene mass fraction in material recovered by the distiller

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 401 of 672

Note: This analysis is only required if a *trans*-(1,2)-Dichloroethylene mass fraction other than 100% is assumed to calculate amount of recovered material or amount of emissions.

- i) Use a gas chromatography method such as EPA method 311 in Appendix A to 40 CFR part 63.
 - ii) Other Methods approved by MPCA may be used pursuant to Minn. R. 7017.2050.
 - iii) If *trans*-(1,2)-Dichloroethylene results are below detection levels, the analytical detection level must be used to report the VOC content value to be used in emission calculations.
 - iv) This analysis shall be conducted for every batch to be used for calculation of *trans*-(1,2)-Dichloroethylene emissions. After a minimum of 30 months of testing recovered material, the Permittee may submit for approval a proposal to define the conditions under which subsequent recovered material batches do not need to be re-tested. The proposal must be supported with actual test data of recovered batches, the associated past operating records and projections of future operating conditions.
- d) Determination of HAP content in coating material
- i) The Permittee may rely on formulation data provided by the manufacturer or supplier, such as the material safety data sheet (MSDS) or safety data sheet (SDS), as long as it represents each HAP compound in the material that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other HAP compounds.
- e) Determination of *trans*-(1,2)-Dichloroethylene in indoor air of non-coating rooms
- i) When required by this permit, or if the Permittee wishes to change the emission rates in Sections 2c and 2d of this Appendix, the Permittee shall perform indoor air testing in the following non-coating rooms:
 - (a) Chemical Storage
 - (b) Shipping and Receiving
 - (c) Northwest Die Cast
 - (d) East Die Cast
 - (e) Gravity Cast
 - (f) Coining
 - (g) Locker Room
 - (h) Lunch Room
 - (i) Offices
 - ii) Use EPA Method TO-15 with Summa Canisters using the following guidelines:
 - (a) Remediation Division Vapor investigation and mitigation decision best management practices at <https://www.pca.state.mn.us/sites/default/files/c-rem3-06.pdf>
 - (b) Remediation Division Vapor mitigation best management practices at <https://www.pca.state.mn.us/business-with-us/vapor-intrusion-guidance>. This requirement terminates when MPCA terminates the Administrative Order.
 - iii) The revised emission rates shall be used in daily emissions calculations described in the permit immediately following MPCA-approval of the indoor air test report.

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 402 of 672

Appendix C. NAAQS modeling and AERA parameters

Tables C1-C6 of this appendix list the parameters used in the April 2022 PM₁₀/PM_{2.5}, NO_x, and Lead air dispersion modeling at the facility. The parameters described the operation of the facility at the maximum permitted capacity. The purpose of listing these parameters is to provide a benchmark for future changes.

Table C.1: PM10 Point Source (24-hour) Note: Note: EQUI 160, EQUI 117, EQUI 223-232, and EQUI 240 operations are limited to 5 am to 11 pm daily

Permit ID	AERMOD ID	Easting (m)	Northing (m)	Base Elev (m)	Emission Rate (lb/hr)	Height (m)	Exit Temp (K)	Exit Vel (m/s)	Diam (m)	Flow rate (ACFM)
EQUI82, EQUI84, EQUI85, EQUI87-89, EQUI92-EQUI95, EQUI97-EQUI100, EQUI116, EQUI166, EQUI173, EQUI219, EQUI220, EQUI233	STRU73	497,469.52	4,991,185.04	283.09	0.01012	12.192	294.261	20.66718	0.6604	15000
EQUI101-EQUI104, EQUI221	STRU1	497,515.69	4,991,223.02	283.09	0.1012	4.2672	327.04	9.08	0.546	4504.712
EQUI101, EQUI102, EQUI104	STRU68	497,504.16	4,991,222.33	283.09	0.01744	10.8204	307.65	2.751836	0.889	3619.278
EQUI103	STRU69	497,511.72	4,991,232.43	283.09	0.003725	10.91184	398.8722	6.087364	0.2032	418.2853
EQUI121-EQUI123	STRU15	497483.54	4991254.83	283.09	0.03887	3.683	312.039	9.08	0.546	4504.712
EQUI124-EQUI126, EQUI157	STRU16	497481.97	4991258.10	283.09	0.06388	3.7338	312.039	9.08	0.546	4504.712
EQUI127-EQUI129	STRU17	497482.40	4991265.22	283.09	0.01864	3.7084	312.039	7.57	0.546	3755.58
EQUI130, EQUI131	STRU74	497,482.33	4991280.77	283.09	0.02084	3.6322	312.039	7.57	0.546	3755.58
EQUI132, EQUI133	STRU20	497,482.57	4,991,286.34	283.09	0.02523	3.6322	312.039	7.57	0.546	3755.58
EQUI134, EQUI135	STRU75	497468.95	4,991,293.05	283.09	0.03348	3.683	312.039	7.57	0.546	3755.58
EQUI136	STRU23	497,462.23	4,991,293.31	283.09	0.02222	3.683	312.039	7.57	0.546	3755.58

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 403 of 672

Permit ID	AERMOD ID	Easting (m)	Northing (m)	Base Elev (m)	Emission Rate (lb/hr)	Height (m)	Exit Temp (K)	Exit Vel (m/s)	Diam (m)	Flow rate (ACFM)
EQUI137, EQUI138	STRU24	497,449.23	4,991,294.27	283.09	0.02202	3.8608	312.039	7.57	0.546	3755.58
EQUI139, EQUI140	STRU25	497,428.18	4,991,284.88	283.09	0.02641	3.7592	312.039	7.57	0.546	3755.58
EQUI141-EQUI143, EQUI155	STRU26	497,427.99	4,991,275.47	283.09	0.05521	3.81	312.039	7.57	0.546	3755.58
EQUI146, EQUI158	STRU30	497,514.59	4,991,210.69	283.09	0.06048	5.2324	312.039	7.57	0.546	3755.58
EQUI147	STRU31	497,513.65	4,991,198.51	283.09	0.02982	5.1816	312.039	7.57	0.546	3755.58
EQUI149, EQUI150	STRU32	497,495.07	4,991,190.04	283.09	0.03007	5.5118	312.039	7.57	0.546	3755.58
EQUI152, EQUI156	STRU33	497,489.65	4,991,190.16	283.09	0.05370	5.334	312.039	7.57	0.546	3755.58
EQUI153, EQUI154	STRU34	497,482.45	4,991,191.19	283.09	0.05749	5.2324	312.039	7.57	0.546	3755.58
EQUI160, EQUI117	STRU35	497,540.87	4,990,864.07	280.55	0.01710	7.315	294.261	4.040	0.546	2004.30
EQUI174	STRU59	497,507.89	4,991,240.39	283.09	No Particulates	10.0584	294.261	9.665178	0.965701	15000
EQUI146, EQUI150, EQUI172, EQUI110, EQUI112	STRU53	497,505.64	4,991,216.93	283.09	0.03630	10.0584	294.261	9.665178	0.965701	15000
EQUI147, EQUI158, EQUI110, EQUI112	STRU52	497,503.83	4,991,197.29	283.09	0.04234	10.0584	294.261	9.665178	0.965701	15000
EQUI149, EQUI152, EQUI154, EQUI156, EQUI110, EQUI112	STRU51	497,488.75	4,991,198.93	283.09	0.05653	10.0584	294.261	9.665178	0.965701	15000
EQUI153, EQUI157, EQUI110, EQUI112	STRU56	497,483.11	4,991,219.35	283.09	0.04285	10.0584	294.261	9.665178	0.965701	15000
EQUI130-EQUI136, EQUI107, EQUI108, EQUI111	STRU44	497,474.10	4,991,285.55	283.09	0.07081	7.9248	294.261	12.41206	1.100146	25000
EQUI137-EQUI141, EQUI107, EQUI108, EQUI111	STRU45	497,436.71	4,991,287.76	283.09	0.05712	7.9248	294.261	12.41206	1.100146	25000

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 404 of 672

Permit ID	AERMOD ID	Easting (m)	Northing (m)	Base Elev (m)	Emission Rate (lb/hr)	Height (m)	Exit Temp (K)	Exit Vel (m/s)	Diam (m)	Flow rate (ACFM)
EQUI142, EQUI143, EQUI155, EQUI107, EQUI108, EQUI111	STRU46	497,436.01	4,991,275.77	283.09	0.04535	7.9248	294.261	12.41206	1.100146	25000
EQUI127-EQUI129, EQUI106, EQUI108	STRU47	497,475.70	4,991,257.67	283.09	0.02241	7.0104	294.261	9.665178	0.965701	15000
EQUI121, EQUI122, EQUI106, EQUI109	STRU48	497,474.48	4,991,250.50	283.09	0.02520	7.0104	294.261	9.665178	0.965701	15000
EQUI123, EQUI106, EQUI109	STRU49	497,473.85	4,991,241.55	283.09	0.01779	7.0104	294.261	9.665178	0.965701	15000
EQUI125, EQUI126, EQUI115, EQUI116, EQUI109	STRU50	497,471.27	4,991,218.35	283.09	0.01688	7.0104	294.261	9.665178	0.965701	15000
EQUI124, EQUI115, EQUI106, EQUI109	STRU43	497,473.47	4,991,236.42	283.09	0.01896	7.0104	294.261	9.665178	0.965701	15000
EQUI113, EQUI114	STRU57	497,458.94	4,991,211.27	283.09	0.001090	9.144	294.261	6.096	0.419405	50
FUGI001	CT1	497,506.00	4,991,256.00	283.09	0.1549	6.000	294.261	9.600	2.500	99,850
FUGI002	CT2	497,513.00	4,991,255.60	283.09	0.1549	6.000	294.261	9.600	2.500	99,850
FUGI004	CT3	497,521.73	4,991,255.96	283.09	0.1549	6.000	294.261	9.600	2.500	99,850
EQUI222	STRU70	497,499.20	4,991,225.76	283.09	0.002235	10.973	352.594	7.991	0.2286	694.9295
EQUI223-EQUI232	STRU71	497,551.22	4,990,875.54	280.55	0.03348	6.401	301.483	2.8165	0.716	2400
EQUI240	STRU72	497,511.46	4,990,881.57	280.55	0.006336	6.401	294.261	16.024	0.274	2000

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 405 of 672

Table C.2: PM2.5 Point Source (24-hour; Annual) Note: EQUI 160, EQUI 117, EQUI 223-232, and EQUI 240 operations are limited to 5 am to 11 pm daily

Permit ID	AERMOD ID	Easting (m)	Northing (m)	Base Elev (m)	Emission Rate (lb/hr)	Height (m)	Exit Temp (K)	Exit Vel (m/s)	Diam (m)	Flow rate (ACFM)
EQUI82, EQUI84, EQUI85, EQUI87-89, EQUI92-EQUI95, EQUI97-EQUI100, EQUI116, EQUI166, EQUI173, EQUI219, EQUI220, EQUI233	STRU73	497,469.52	4,991,185.04	283.09	0.01012	12.192	294.261	20.66718	0.6604	15000
EQUI101-EQUI104, EQUI221	STRU1	497,515.69	4,991,223.02	283.09	0.1012	4.2672	327.04	9.08	0.546	4504.712
EQUI101, EQUI102, EQUI104	STRU68	497,504.16	4,991,222.33	283.09	0.01744	10.8204	307.65	2.751836	0.889	3619.278
EQUI103	STRU69	497,511.72	4,991,232.43	283.09	0.003725	10.91184	398.8722	6.087364	0.2032	418.2853
EQUI121-EQUI123	STRU15	497,483.54	4,991,254.83	283.09	0.03887	3.683	312.039	9.08	0.546	4504.712
EQUI124-EQUI126, EQUI157	STRU16	497,481.97	4,991,258.10	283.09	0.06388	3.7338	312.039	9.08	0.546	4504.712
EQUI127-EQUI129	STRU17	497,482.40	4,991,265.22	283.09	0.01864	3.7084	312.039	7.57	0.546	3755.58
EQUI130, EQUI131	STRU74	497,482.33	4,991,280.77	283.09	0.02084	3.6322	312.039	7.57	0.546	3755.58
EQUI132, EQUI133	STRU20	497,482.57	4,991,286.34	283.09	0.02523	3.6322	312.039	7.57	0.546	3755.58
EQUI134, EQUI135	STRU75	497,468.95	4,991,293.05	283.09	0.03348	3.683	312.039	7.57	0.546	3755.58
EQUI136	STRU23	497,462.23	4,991,293.31	283.09	0.02222	3.683	312.039	7.57	0.546	3755.58
EQUI137, EQUI138	STRU24	497,449.23	4,991,294.27	283.09	0.02202	3.8608	312.039	7.57	0.546	3755.58
EQUI139, EQUI140	STRU25	497,428.18	4,991,284.88	283.09	0.02641	3.7592	312.039	7.57	0.546	3755.58
EQUI141-EQUI143, EQUI155	STRU26	497,427.99	4,991,275.47	283.09	0.05521	3.81	312.039	7.57	0.546	3755.58

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 406 of 672

Permit ID	AERMOD ID	Easting (m)	Northing (m)	Base Elev (m)	Emission Rate (lb/hr)	Height (m)	Exit Temp (K)	Exit Vel (m/s)	Diam (m)	Flow rate (ACFM)
EQUI146, EQUI158	STRU30	497,514.59	4,991,210.69	283.09	0.06048	5.2324	312.039	7.57	0.546	3755.58
EQUI147	STRU31	497,513.65	4,991,198.51	283.09	0.02982	5.1816	312.039	7.57	0.546	3755.58
EQUI149, EQUI150	STRU32	497,495.07	4,991,190.04	283.09	0.03007	5.5118	312.039	7.57	0.546	3755.58
EQUI152, EQUI156	STRU33	497,489.65	4,991,190.16	283.09	0.05370	5.334	312.039	7.57	0.546	3755.58
EQUI153, EQUI154	STRU34	497,482.45	4,991,191.19	283.09	0.05749	5.2324	312.039	7.57	0.546	3755.58
EQUI160, EQUI117	STRU35	497,540.87	4,990,864.07	280.55	0.01710	7.315	294.261	4.040	0.546	2004.30
EQUI174	STRU59	497,507.89	4,991,240.39	283.09	No Particulates	10.0584	294.261	9.665178	0.965701	15000
EQUI146, EQUI150, EQUI172, EQUI110, EQUI112	STRU53	497,505.64	4,991,216.93	283.09	0.03630	10.0584	294.261	9.665178	0.965701	15000
EQUI147, EQUI158, EQUI110, EQUI112	STRU52	497,503.83	4,991,197.29	283.09	0.04234	10.0584	294.261	9.665178	0.965701	15000
EQUI149, EQUI152, EQUI154, EQUI156, EQUI110, EQUI112	STRU51	497,488.75	4,991,198.93	283.09	0.05654	10.0584	294.261	9.665178	0.965701	15000
EQUI153, EQUI157, EQUI110, EQUI112	STRU56	497,483.11	4,991,219.35	283.09	0.04285	10.0584	294.261	9.665178	0.965701	15000
EQUI130-EQUI136, EQUI107, EQUI108, EQUI111	STRU44	497,474.10	4,991,285.55	283.09	0.07081	7.9248	294.261	12.41206	1.100146	25000
EQUI137-EQUI141, EQUI107, EQUI108, EQUI111	STRU45	497,436.71	4,991,287.76	283.09	0.05712	7.9248	294.261	12.41206	1.100146	25000

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 407 of 672

Permit ID	AERMOD ID	Easting (m)	Northing (m)	Base Elev (m)	Emission Rate (lb/hr)	Height (m)	Exit Temp (K)	Exit Vel (m/s)	Diam (m)	Flow rate (ACFM)
EQUI142, EQUI143, EQUI155, EQUI107, EQUI108, EQUI111	STRU46	497,436.01	4,991,275.77	283.09	0.04535	7.9248	294.261	12.41206	1.100146	25000
EQUI127-EQUI129, EQUI106, EQUI108	STRU47	497,475.70	4,991,257.67	283.09	0.02241	7.0104	294.261	9.665178	0.965701	15000
EQUI121, EQUI122, EQUI106, EQUI109	STRU48	497,474.48	4,991,250.50	283.09	0.02520	7.0104	294.261	9.665178	0.965701	15000
EQUI123, EQUI106, EQUI109	STRU49	497,473.85	4,991,241.55	283.09	0.01779	7.0104	294.261	9.665178	0.965701	15000
EQUI125, EQUI126, EQUI115, EQUI116, EQUI109	STRU50	497,471.27	4,991,218.35	283.09	0.01688	7.0104	294.261	9.665178	0.965701	15000
EQUI124, EQUI115, EQUI106, EQUI109	STRU43	497,473.47	4,991,236.42	283.09	0.01896	7.0104	294.261	9.665178	0.965701	15000
EQUI113, EQUI114	STRU57	497,458.94	4,991,211.27	283.09	0.001090	9.144	294.261	6.096	0.419405	50
FUGI001	CT1	497,506.00	4,991,256.00	283.09	0.1549	6.000	294.261	9.600	2.500	99,850
FUGI002	CT2	497,513.00	4,991,255.60	283.09	0.1549	6.000	294.261	9.600	2.500	99,850
FUGI004	CT3	497,521.73	4,991,255.96	283.09	0.01549	6.000	294.261	9.600	2.500	99,850
EQUI222	STRU70	497,499.20	4,991,225.76	283.09	0.002235	10.973	352.594	7.991	0.2286	694.9295
EQUI223-EQUI232	STRU71	497,551.22	4,990,875.54	280.55	0.03348	6.401	301.483	2.8165	0.716	2400

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 408 of 672

Table C.3: NOx Point Source (1-hour; Annual) Note: EQUI 160, EQUI 117, EQUI 223-232, and EQUI 240 operations are limited to 5 am to 11 pm daily

Permit ID	AERMOD ID	Easting (m)	Northing (m)	Base_Elev (m)	Emission Rate (lb/hr)	Height (m)	Exit Temp (K)	Exit Vel (m/s)	Diam (m)	Flow rate (ACFM)
EQUI82, EQUI84, EQUI85, EQUI87-89, EQUI92-EQUI95, EQUI97-EQUI100, EQUI116, EQUI166, EQUI173, EQUI219, EQUI220, EQUI233	STRU73	497,469.52	4,991,185.04	283.09	No Emissions	12.192	294.261	20.66718	0.6604	15000
EQUI101, EQUI102, EQUI104	STRU68	497,504.16	4,991,222.33	283.09	0.229411765	10.8204	307.65	2.751836	0.889	3619.278
EQUI103	STRU69	497,511.72	4,991,232.43	283.09	0.049019608	10.91184	398.8722	6.087364	0.2032	418.2853
EQUI146, EQUI150, EQUI172, EQUI110, EQUI112	STRU53	497,505.64	4,991,216.93	283.09	0.24527598	10.0584	294.261	9.665178	0.965701	15000
EQUI147, EQUI158, EQUI110, EQUI112	STRU52	497,503.83	4,991,197.29	283.09	0.24527598	10.0584	294.261	9.665178	0.965701	15000
EQUI149, EQUI152, EQUI154, EQUI156, EQUI110, EQUI112	STRU51	497,488.75	4,991,198.93	283.09	0.24527598	10.0584	294.261	9.665178	0.965701	15000
EQUI153, EQUI157, EQUI110, EQUI112	STRU56	497,483.11	4,991,219.35	283.09	0.24527598	10.0584	294.261	9.665178	0.965701	15000
EQUI130-EQUI136, EQUI107, EQUI108, EQUI111	STRU44	497,474.10	4,991,285.55	283.09	0.406928824	7.9248	294.261	12.41206	1.100146	25000
EQUI137-EQUI141, EQUI107, EQUI108, EQUI111	STRU45	497,436.71	4,991,287.76	283.09	0.406928824	7.9248	294.261	12.41206	1.100146	25000
EQUI142, EQUI143, EQUI155, EQUI107, EQUI108, EQUI111	STRU46	497,436.01	4,991,275.77	283.09	0.406928824	7.9248	294.261	12.41206	1.100146	25000

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 409 of 672

Permit ID	AERMOD ID	Easting (m)	Northing (m)	Base_Elev (m)	Emission Rate (lb/hr)	Height (m)	Exit Temp (K)	Exit Vel (m/s)	Diam (m)	Flow rate (ACFM)
EQUI127-EQUI129, EQUI106, EQUI108	STRU47	497,475.70	4,991,257.67	283.09	0.198742549	7.0104	294.261	9.665178	0.965701	15000
EQUI121, EQUI122, EQUI106, EQUI109	STRU48	497,474.48	4,991,250.50	283.09	0.182598039	7.0104	294.261	9.665178	0.965701	15000
EQUI123, EQUI106, EQUI109	STRU49	497,473.85	4,991,241.55	283.09	0.182598039	7.0104	294.261	9.665178	0.965701	15000
EQUI109	STRU50	497,471.27	4,991,218.35	283.09	0.121323529	7.0104	294.261	9.665178	0.965701	15000
EQUI106, EQUI109	STRU43	497,473.47	4,991,236.42	283.09	0.182598039	7.0104	294.261	9.665178	0.965701	15000
EQUI222	STRU70	497,499.20	4,991,225.76	283.09	0.029411765	10.9728	352.5944	7.99084	0.2286	694.9295

Table C.4: Lead Point Source (Quarter) Note: EQUI 160, EQUI 117, EQUI 223-232, and EQUI 240 operations are limited to 5 am to 11 pm daily

Permit ID	AERMOD ID	Easting (m)	Northing (m)	Base_Elev (m)	Emission Rate (lb/hr)	Height (m)	Exit Temp (K)	Exit Vel (m/s)	Diam (m)	Flow rate (ACFM)
EQUI82, EQUI84, EQUI85, EQUI87-89, EQUI92-EQUI95, EQUI97-EQUI100, EQUI116, EQUI166, EQUI173, EQUI219, EQUI220, EQUI233	STRU73	497,469.52	4,991,185.04	283.09	0	12.192	294.261	20.66718	0.6604	15000
EQUI101-EQUI104, EQUI221	STRU1	497,515.69	4,991,223.02	283.09	1.24E-04	4.2672	327.039	9.08	0.546	4504.712
EQUI101, EQUI102, EQUI104	STRU68	497,504.16	4,991,222.33	283.09	1.15E-06	10.8204	307.65	2.751836	0.889	3619.278
EQUI103	STRU69	497,511.72	4,991,232.43	283.09	2.45E-07	10.91184	398.8722	6.087364	0.2032	418.2853
EQUI121-EQUI123	STRU15	497,483.50	4,991,254.80	283.09	9.58E-04	3.683	312.039	9.08	0.546	4504.712
EQUI124-EQUI126, EQUI157	STRU16	497,482.00	4,991,258.10	283.09	1.57E-03	3.7338	312.039	9.08	0.546	4504.712

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 410 of 672

Permit ID	AERMOD ID	Easting (m)	Northing (m)	Base_Elev (m)	Emission Rate (lb/hr)	Height (m)	Exit Temp (K)	Exit Vel (m/s)	Diam (m)	Flow rate (ACFM)
EQUI127-EQUI129	STRU17	497,482.40	4,991,265.20	283.09	4.59E-04	3.7084	312.039	7.57	0.546	3755.58
EQUI130, EQUI131	STRU74	497,482.33	4,991,280.77	283.09	5.14E-04	3.6322	312.039	7.57	0.546	3755.58
EQUI132, EQUI133	STRU20	497,482.57	4,991,286.34	283.09	6.22E-04	3.6322	312.039	7.57	0.546	3755.58
EQUI134, EQUI135	STRU75	497,468.95	4,991,293.05	283.09	8.25E-04	3.683	312.039	7.57	0.546	3755.58
EQUI136	STRU23	497,462.23	4,991,293.31	283.09	5.48E-04	3.683	312.039	7.57	0.546	3755.58
EQUI137, EQUI138	STRU24	497,449.23	4,991,294.27	283.09	5.43E-04	3.8608	312.039	7.57	0.546	3755.58
EQUI139, EQUI140	STRU25	497,428.18	4,991,284.88	283.09	6.51E-04	3.7592	312.039	7.57	0.546	3755.58
EQUI141-EQUI143, EQUI155	STRU26	497,427.99	4,991,275.47	283.09	1.36E-03	3.81	312.039	7.57	0.546	3755.58
EQUI146, EQUI158	STRU30	497,514.59	4,991,210.69	283.09	1.49E-03	5.2324	312.039	7.57	0.546	3755.58
EQUI147	STRU31	497,513.65	4,991,198.51	283.09	7.35E-04	5.1816	312.039	7.57	0.546	3755.58
EQUI149, EQUI150	STRU32	497,495.07	4,991,190.04	283.09	7.41E-04	5.5118	312.039	7.57	0.546	3755.58
EQUI152, EQUI156	STRU33	497,489.65	4,991,190.16	283.09	1.32E-03	5.334	312.039	7.57	0.546	3755.58
EQUI153, EQUI154	STRU34	497,482.45	4,991,191.19	283.09	1.42E-03	5.2324	312.039	7.57	0.546	3755.58
EQUI160, EQUI117	STRU35	497,540.87	4,990,864.07	280.55	4.41E-03	7.315	294.261	4.040	0.546	2,004
EQUI174	STRU59	497,507.89	4,991,240.39	283.09	0	10.0584	294.261	9.665178	0.965701	15000
EQUI146, EQUI150, EQUI172, EQUI110, EQUI112	STRU53	497,505.64	4,991,216.93	283.09	1.96E-04	10.0584	294.261	9.665178	0.965701	15000
EQUI147, EQUI158, EQUI110, EQUI112	STRU52	497,503.83	4,991,197.29	283.09	2.63E-04	10.0584	294.261	9.665178	0.965701	15000

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 411 of 672

Permit ID	AERMOD ID	Easting (m)	Northing (m)	Base_Elev (m)	Emission Rate (lb/hr)	Height (m)	Exit Temp (K)	Exit Vel (m/s)	Diam (m)	Flow rate (ACFM)
EQUI149, EQUI152, EQUI154, EQUI156, EQUI110, EQUI112	STRU51	497,488.75	4,991,198.93	283.09	4.19E-04	10.0584	294.261	9.665178	0.965701	15000
EQUI153, EQUI157, EQUI110, EQUI112	STRU56	497,483.11	4,991,219.35	283.09	2.68E-04	10.0584	294.261	9.665178	0.965701	15000
EQUI130-EQUI136, EQUI107, EQUI108, EQUI111	STRU44	497,474.10	4,991,285.55	283.09	4.42E-04	7.9248	294.261	12.41206	1.100146	25000
EQUI137-EQUI141, EQUI107, EQUI108, EQUI111	STRU45	497,436.71	4,991,287.76	283.09	2.91E-04	7.9248	294.261	12.41206	1.100146	25000
EQUI142, EQUI143, EQUI155, EQUI107, EQUI108, EQUI111	STRU46	497,436.01	4,991,275.77	283.09	1.61E-04	7.9248	294.261	12.41206	1.100146	25000
EQUI127-EQUI129, EQUI106, EQUI108	STRU47	497,475.70	4,991,257.67	283.09	8.16E-05	7.0104	294.261	9.665178	0.965701	15000
EQUI121, EQUI122, EQUI106, EQUI109	STRU48	497,474.48	4,991,250.50	283.09	1.26E-04	7.0104	294.261	9.665178	0.965701	15000
EQUI123, EQUI106, EQUI109	STRU49	497,473.85	4,991,241.55	283.09	4.40E-05	7.0104	294.261	9.665178	0.965701	15000
EQUI125, EQUI126, EQUI115, EQUI116, EQUI109	STRU50	497,471.27	4,991,218.35	283.09	8.72E-05	7.0104	294.261	9.665178	0.965701	15000
EQUI124, EQUI115, EQUI106, EQUI109	STRU43	497,473.47	4,991,236.42	283.09	7.96E-06	7.0104	294.261	9.665178	0.965701	15000
EQUI113, EQUI114	STRU57	497,458.94	4,991,211.27	283.09	2.29E-05	9.144	294.261	6.096	0.419405	50
EQUI222	STRU70	497,499.20	4,991,225.80	283.09	1.47E-07	10.973	352.594	7.991	0.229	695
EQUI223-EQUI232	STRU71	497,551.20	4,990875.50	280.55	No Emissions	6.401	301.483	2.815	0.716	2,400
EQUI240	STRU72	497,511.50	4,990881.60	280.55	No Emissions	6.401	294.261	16.024	0.274	2,000

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 412 of 672

Table C.5: Unit Emission Rate (1, 3, 8, 24, Month, Annual) Note: EQU1 160, EQU1 117, EQU1 223-232, and EQU1 240 operations are limited to 5 am to 11 pm daily
 The unit emission rate indicates that modeling was conducted at the stacks that vent more than one unit. Lead NAAQS for 3 month averaging time and annual is for health-based air guidance values emission limit at STRUs.

Permit ID	AERMOD ID	Easting (m)	Northing (m)	Base_Elev (m)	Emission Rate (lb/hr)	Height (m)	Exit Temp (K)	Exit Vel (m/s)	Diam (m)	Flow rate (ACFM)
EQUI82, EQUI84, EQUI85, EQUI87-89, EQUI92-EQUI95, EQUI97-EQUI100, EQUI116, EQUI166, EQUI173, EQUI219, EQUI220, EQUI233	STRU73	497,469.52	4,991,185.04	283.09	7.9365	12.192	294.261	20.66718	0.6604	15000
EQUI101-EQUI104, EQUI221	STRU1	497,515.69	4,991,223.02	283.09	7.9365	4.2672	327.039	9.08	0.546	4504.712
EQUI121-EQUI123	STRU15	497,483.50	4,991,254.80	283.09	7.9365	3.683	312.039	9.08	0.546	4504.712
EQUI124-EQUI126, EQUI157	STRU16	497,482.00	4,991,258.10	283.09	7.9365	3.7338	312.039	9.08	0.546	4504.712
EQUI127-EQUI129	STRU17	497,482.40	4,991,265.20	283.09	7.9365	3.7084	312.039	7.57	0.546	3755.58
EQUI130, EQUI131	STRU74	497,482.33	4,991,280.77	283.09	7.9365	3.6322	312.039	7.57	0.546	3755.58
EQUI132, EQUI133	STRU20	497,482.57	4,991,286.34	283.09	7.9365	3.6322	312.039	7.57	0.546	3755.58
EQUI134, EQUI135	STRU75	497,468.95	4,991,293.05	283.09	7.9365	3.683	312.039	7.57	0.546	3755.58
EQUI136	STRU23	497,462.23	4,991,293.31	283.09	7.9365	3.683	312.039	7.57	0.546	3755.58
EQUI137, EQUI138	STRU24	497,449.23	4,991,294.27	283.09	7.9365	3.8608	312.039	7.57	0.546	3755.58
EQUI139, EQUI140	STRU25	497,428.18	4,991,284.88	283.09	7.9365	3.7592	312.039	7.57	0.546	3755.58
EQUI141-EQUI143, EQUI155	STRU26	497,427.99	4,991,275.47	283.09	7.9365	3.81	312.039	7.57	0.546	3755.58
EQUI146, EQUI158	STRU30	497,514.59	4,991,210.69	283.09	7.9365	5.2324	312.039	7.57	0.546	3755.58
EQUI147	STRU31	497,513.65	4,991,198.51	283.09	7.9365	5.1816	312.039	7.57	0.546	3755.58

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 413 of 672

Permit ID	AERMOD ID	Easting (m)	Northing (m)	Base_Elev (m)	Emission Rate (lb/hr)	Height (m)	Exit Temp (K)	Exit Vel (m/s)	Diam (m)	Flow rate (ACFM)
EQUI149, EQUI150	STRU32	497,495.07	4,991,190.04	283.09	7.9365	5.5118	312.039	7.57	0.546	3755.58
EQUI152, EQUI156	STRU33	497,489.65	4,991,190.16	283.09	7.9365	5.334	312.039	7.57	0.546	3755.58
EQUI153, EQUI154	STRU34	497,482.45	4,991,191.19	283.09	7.9365	5.2324	312.039	7.57	0.546	3755.58
EQUI160, EQUI117	STRU35	497,540.87	4,990,864.07	280.55	7.9365	7.315	294.261	4.040	0.546	2,004
EQUI167	STRU41	497,479.00	4,991,262.00	283.09	7.9365	5.232	294.261	10.11442	0.2032	695
EQUI174	STRU59	497,507.89	4,991,240.39	283.09	7.9365	10.0584	294.261	9.665178	0.965701	15000
EQUI146, EQUI150, EQUI172, EQUI110, EQUI112	STRU53	497,505.64	4,991,216.93	283.09	7.9365	10.0584	294.261	9.665178	0.965701	15000
EQUI147, EQUI158, EQUI110, EQUI112	STRU52	497,503.83	4,991,197.29	283.09	7.9365	10.0584	294.261	9.665178	0.965701	15000
EQUI149, EQUI152, EQUI154, EQUI156, EQUI110, EQUI112	STRU51	497,488.75	4,991,198.93	283.09	7.9365	10.0584	294.261	9.665178	0.965701	15000
EQUI153, EQUI157, EQUI110, EQUI112	STRU56	497,483.11	4,991,219.35	283.09	7.9365	10.0584	294.261	9.665178	0.965701	15000
STRU60	STRU60	497,485.50	4,991,242.50	283.09	7.9365	10.0584	294.261	9.665178	0.965701	15000
EQUI130-EQUI136, EQUI107, EQUI108, EQUI111	STRU44	497,474.10	4,991,285.60	283.09	7.9365	7.9248	294.261	12.41206	1.100146	25000
EQUI137-EQUI141, EQUI107, EQUI108, EQUI111	STRU45	497,436.71	4,991,287.76	283.09	7.9365	7.9248	294.261	12.41206	1.100146	25000
EQUI142, EQUI143, EQUI155, EQUI107, EQUI108, EQUI111	STRU46	497,436.71	4,991,287.76	283.09	7.9365	7.9248	294.261	12.41206	1.100146	25000
EQUI127-EQUI129, EQUI106, EQUI108	STRU47	497,475.70	4,991,257.67	283.09	7.9365	7.0104	294.261	9.665178	0.965701	15000

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 414 of 672

Permit ID	AERMOD ID	Easting (m)	Northing (m)	Base_Elev (m)	Emission Rate (lb/hr)	Height (m)	Exit Temp (K)	Exit Vel (m/s)	Diam (m)	Flow rate (ACFM)
EQUI121, EQUI122, EQUI106, EQUI109	STRU48	497,474.48	4,991,250.50	283.09	7.9365	7.0104	294.261	9.665178	0.965701	15000
EQUI123, EQUI106, EQUI109	STRU49	497,473.85	4,991,241.55	283.09	7.9365	7.0104	294.261	9.665178	0.965701	15000
EQUI125, EQUI126, EQUI115, EQUI116, EQUI109	STRU50	497,471.27	4,991,218.35	283.09	7.9365	7.0104	294.261	9.665178	0.965701	15000
EQUI124, EQUI115, EQUI106, EQUI109	STRU43	497,473.47	4,991,235.42	283.09	7.9365	7.010	294.261	9.665	0.966	15,000
EQUI113, EQUI114	STRU57	497,558.94	4,991,211.27	283.09	7.9365	9.144	294.261	6.096	0.419	50
EQUI101, EQUI102, EQUI104	STRU68	497,504.16	4,991,222.33	283.09	7.9365	10.820	307.650	2.752	0.889	3,619
EQUI103	STRU69	497,511.72	4,991,232.43	283.09	7.9365	10.912	398.872	6.087	0.203	418
EQUI222	STRU70	497,499.20	4,991,225.76	280.55	7.9365	10.973	352.594	7.991	0.229	695
EQUI223-EQUI232	STRU71	497,551.22	4,990,875.54	280.55	7.9365	6.401	301.483	2.815	0.716	2,400
EQUI240	STRU72	497,511.46	4,990,881.57	280.55	7.9365	6.401	294.261	16.024	0.274	2,000

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 415 of 672

Volume Source Parameters:

Table C.6: STRU 67 and 68 (PM10, PM2.5, NOx, and Lead)

Permit ID	AERMOD ID	Pollutant	Averaging time	Easting (m)	ONorthing (m)	Base Elev (m)	Emission Rate (lb/hr)	Height (m)	Lateral dimension (m)	Vertical dimension (m)	Length X (m)
COMG10	NBLDGIA	PM2.5	24-hour; Annual	497,473.68	4,991,235.04	283.09	0.0797	7.62	22.10	3.544	95.04
		PM10	24-hour	497,473.68	4,991,235.04	283.09	0.0797	7.62	22.10	3.544	95.04
		NOX	1-hour, annual	497,473.68	4,991,235.04	283.09	1.0482	7.62	22.10	3.544	95.04
		Lead	Qtr	497,473.68	4,991,235.04	283.09	5.24E-06	7.62	22.10	3.544	95.04
COMG15	SBLDGIA	PM2.5	24-hour; Annual	497,533.39	4,990,886.29	281	0.0171	5.49	11.89	2.553	51.12
		PM10	24-hour	497,533.39	4,990,886.29	281	0.0171	5.49	11.89	2.553	51.12
		NOX	1-hour, annual	497,533.39	4,990,886.29	281	0.2248	5.49	11.89	2.553	51.12
		Lead	Qtr	497,533.39	4,990,886.29	281	1.12E-06	5.49	11.89	2.553	51.12

Table C.7: PM10 Volume source (24-hr)

Permit ID	AERMOD ID	Easting [m]	Northing [m]	Base Elev [m]	Emission Rate (lb/hr)	Height [m]	Lateral dimension [m]	Vertical dimension [m]	Length X [m]
FUGI 3	NBLDG1	497,444.50	4,991,196.93	282.04	7.76E-04	2.591	4.65	2.41	20.00
	NBLDG2	497,437.11	4,991,190.20	282.09	7.76E-04	2.591	4.65	2.41	20.00
	NBLDG3	497,429.71	4,991,183.47	281.84	7.76E-04	2.591	4.65	2.41	20.00
	NBLDG4	497,422.32	4,991,176.74	281.76	7.76E-04	2.591	4.65	2.41	20.00
	NBLDG5	497,414.92	4,991,170.00	281.51	7.76E-04	2.591	4.65	2.41	20.00

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

Permit ID	AERMOD ID	Easting [m]	Northing [m]	Base Elev [m]	Emission Rate (lb/hr)	Height [m]	Lateral dimension [m]	Vertical dimension [m]	Length X [m]
FUGI 3	NBLDG6	497,407.52	4,991,163.27	281.29	7.76E-04	2.591	4.65	2.41	20.00
	NBLDG7	497,400.13	4,991,156.54	281.11	7.76E-04	2.591	4.65	2.41	20.00
	NBLDG8	497,392.73	4,991,149.81	280.92	7.76E-04	2.591	4.65	2.41	20.00
	NBLDG9	497,385.34	4,991,143.08	280.7	7.76E-04	2.591	4.65	2.41	20.00
	NBLDG10	497,424.66	4,991,186.72	282.24	7.76E-04	2.591	4.65	2.41	20.00
	NBLDG11	497,416.16	4,991,184.85	282.67	7.76E-04	2.591	4.65	2.41	20.00
	NBLDG12	497,411.02	4,991,176.45	281.82	7.76E-04	2.591	4.65	2.41	20.00
	NBLDG13	497,437.24	4,991,342.90	283.36	3.51E-04	2.591	4.65	2.41	20.00
	NBLDG14	497,443.20	4,991,335.54	283.3	3.51E-04	2.591	4.65	2.41	20.00
	NBLDG15	497,451.65	4,991,330.18	283.17	3.51E-04	2.591	4.65	2.41	20.00
	NBLDG16	497,459.55	4,991,324.08	283.12	3.51E-04	2.591	4.65	2.41	20.00
	NBLDG17	497,467.24	4,991,317.68	283.04	3.51E-04	2.591	4.65	2.41	20.00
	NBLDG18	497,473.27	4,991,309.72	283.02	3.51E-04	2.591	4.65	2.41	20.00
	NBLDG19	497,479.35	4,991,301.78	283	3.51E-04	2.591	4.65	2.41	20.00
	NBLDG20	497,485.60	4,991,293.97	283.07	3.51E-04	2.591	4.65	2.41	20.00
	NBLDG21	497,491.84	4,991,286.16	283.01	3.51E-04	2.591	4.65	2.41	20.00
	NBLDG22	497,496.17	4,991,277.16	282.95	3.51E-04	2.591	4.65	2.41	20.00
	NBLDG23	497,500.40	4,991,268.10	282.86	3.51E-04	2.591	4.65	2.41	20.00
	SBLDG1	497,426.24	4,991,037.50	279.11	3.18E-04	2.628	4.651	2.444	20.000

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

Permit ID	AERMOD ID	Easting [m]	Northing [m]	Base Elev [m]	Emission Rate (lb/hr)	Height [m]	Lateral dimension [m]	Vertical dimension [m]	Length X [m]
FUGI 3	SBLDG2	497,435.79	4,991,040.46	279.31	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG3	497,445.34	4,991,043.42	279.43	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG4	497,454.89	4,991,046.38	279.65	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG5	497,464.44	4,991,049.34	279.83	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG6	497,474.00	4,991,052.30	279.88	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG7	497,483.55	4,991,055.27	280.01	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG8	497,493.10	4,991,058.23	280.18	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG9	497,502.65	4,991,061.19	280.31	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG10	497,512.20	4,991,064.15	280.32	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG11	497,521.86	4,991,066.00	280.29	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG12	497,531.80	4,991,064.90	280.27	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG13	497,541.74	4,991,063.79	280.22	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG14	497,549.69	4,991,057.89	280.26	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG15	497,556.70	4,991,050.97	280.37	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG16	497,561.65	4,991,042.28	280.44	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG17	497,566.38	4,991,033.49	280.48	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG18	497,569.44	4,991,023.97	280.62	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG19	497,572.50	4,991,014.45	280.73	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG20	497,575.56	4,991,004.93	280.74	3.18E-04	2.628	4.651	2.444	20.000

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

Permit ID	AERMOD ID	Easting [m]	Northing [m]	Base Elev [m]	Emission Rate (lb/hr)	Height [m]	Lateral dimension [m]	Vertical dimension [m]	Length X [m]
FUGI 3	SBLDG21	497,578.61	4,990,995.41	280.73	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG22	497,581.67	4,990,985.89	280.73	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG23	497,584.73	4,990,976.37	280.6	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG24	497,587.79	4,990,966.84	280.41	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG25	497,590.84	4,990,957.32	280.37	3.18E-04	2.628	4.651	2.444	20.000
	SBLDG26	497,593.90	4,990,947.80	280.39	2.44E-04	2.628	4.651	2.444	20.000
	SBLDG27	497,596.96	4,990,938.28	280.49	2.44E-04	2.628	4.651	2.444	20.000
	SBLDG28	497,600.02	4,990,928.76	280.5	2.44E-04	2.628	4.651	2.444	20.000
	SBLDG29	497,603.07	4,990,919.24	280.66	2.44E-04	2.628	4.651	2.444	20.000
	SBLDG30	497,606.13	4,990,909.72	280.86	2.44E-04	2.628	4.651	2.444	20.000
	SBLDG31	497,609.19	4,990,900.20	280.91	1.78E-04	2.628	4.651	2.444	20.000
	SBLDG32	497,610.96	4,990,890.61	280.91	1.78E-04	2.628	4.651	2.444	20.000
	SBLDG33	497,606.68	4,990,882.39	281.17	1.78E-04	2.628	4.651	2.444	20.000
	SBLDG34	497,598.18	4,990,877.12	281.31	1.78E-04	2.628	4.651	2.444	20.000
	SBLDG35	497,589.51	4,990,872.22	281.22	1.78E-04	2.628	4.651	2.444	20.000
	SBLDG36	497,580.01	4,990,869.07	281.17	1.78E-04	2.628	4.651	2.444	20.000
	SBLDG37	497,570.52	4,990,865.92	281.04	1.78E-04	2.628	4.651	2.444	20.000
	SBLDG38	497,561.03	4,990,862.78	280.95	1.78E-04	2.628	4.651	2.444	20.000
	SBLDG39	497,551.54	4,990,859.63	280.72	1.78E-04	2.628	4.651	2.444	20.000

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 419 of 672

Permit ID	AERMOD ID	Easting [m]	Northing [m]	Base Elev [m]	Emission Rate (lb/hr)	Height [m]	Lateral dimension [m]	Vertical dimension [m]	Length X [m]
FUGI 3	SBLDG40	497,542.05	4,990,856.48	280.59	1.78E-04	2.628	4.651	2.444	20.000
	SBLDG41	497,532.56	4,990,853.33	280.53	1.78E-04	2.628	4.651	2.444	20.000
	SBLDG42	497,523.06	4,990,850.18	280.55	1.78E-04	2.628	4.651	2.444	20.000
	SBLDG43	497,513.45	4,990,849.29	280.53	1.78E-04	2.628	4.651	2.444	20.000
	SBLDG44	497,503.81	4,990,851.78	280.5	1.78E-04	2.628	4.651	2.444	20.000
	SBLDG45	497,494.75	4,990,855.56	280.51	1.78E-04	2.628	4.651	2.444	20.000
	SBLDG46	497,485.14	4,990,852.82	280.47	1.78E-04	2.628	4.651	2.444	20.000
	SBLDG47	497,564.36	4,990,944.84	281.03	4.22E-04	2.628	4.651	2.444	20.000
	SBLDG48	497,573.84	4,990,948.00	280.92	4.22E-04	2.628	4.651	2.444	20.000
	SBLDG49	497,583.33	4,990,951.17	280.62	4.22E-04	2.628	4.651	2.444	20.000
	SBLDG50	497,580.96	4,990,897.97	281.11	4.22E-04	2.628	4.651	2.444	20.000
	SBLDG51	497,590.41	4,990,901.26	281.31	4.22E-04	2.628	4.651	2.444	20.000
	SBLDG52	497,599.85	4,990,904.55	281.31	4.22E-04	2.628	4.651	2.444	20.000

Table C.8: PM2.5 Volume source (24-hr, Annual)

Permit ID	AERMOD ID	Easting [m]	Northing [m]	Base Elev [m]	Emission Rate (lb/hr)	Height [m]	Lateral dimension [m]	Vertical dimension [m]	Length_X [m]
FUGI 3	NBLDG1	497,444.50	4,991,196.93	282.04	1.91E-04	2.591	4.651	2.41	20.000
	NBLDG2	497,437.11	4,991,190.20	282.09	1.91E-04	2.591	4.651	2.41	20.000
	NBLDG3	497,429.71	4,991,183.47	281.84	1.91E-04	2.591	4.651	2.41	20.000

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 420 of 672

Permit ID	AERMOD ID	Easting [m]	Northing [m]	Base Elev [m]	Emission Rate (lb/hr)	Height [m]	Lateral dimension [m]	Vertical dimension [m]	Length_X [m]
FUGI 3	NBLDG4	497,422.32	4,991,176.74	281.76	1.91E-04	2.591	4.651	2.41	20.000
	NBLDG5	497,414.92	4,991,170.00	281.51	1.91E-04	2.591	4.651	2.41	20.000
	NBLDG6	497,407.52	4,991,163.27	281.29	1.91E-04	2.591	4.651	2.41	20.000
	NBLDG7	497,400.13	4,991,156.54	281.11	1.91E-04	2.591	4.651	2.41	20.000
	NBLDG8	497,392.73	4,991,149.81	280.92	1.91E-04	2.591	4.651	2.41	20.000
	NBLDG9	497,385.34	4,991,143.08	280.7	1.91E-04	2.591	4.651	2.41	20.000
	NBLDG10	497,424.66	4,991,186.72	282.24	1.91E-04	2.591	4.651	2.41	20.000
	NBLDG11	497,416.16	4,991,184.85	282.67	1.91E-04	2.591	4.651	2.41	20.000
	NBLDG12	497,411.02	4,991,176.45	281.82	1.91E-04	2.591	4.651	2.41	20.000
	NBLDG13	497,437.24	4,991,342.90	283.36	8.61E-05	2.591	4.651	2.41	20.000
	NBLDG14	497,443.20	4,991,335.54	283.3	8.61E-05	2.591	4.651	2.41	20.000
	NBLDG15	497,451.65	4,991,330.18	283.17	8.61E-05	2.591	4.651	2.41	20.000
	NBLDG16	497,459.55	4,991,324.08	283.12	8.61E-05	2.591	4.651	2.41	20.000
	NBLDG17	497,467.24	4,991,317.68	283.04	8.61E-05	2.591	4.651	2.41	20.000
	NBLDG18	497,473.27	4,991,309.72	283.02	8.61E-05	2.591	4.651	2.41	20.000
	NBLDG19	497,479.35	4,991,301.78	283	8.61E-05	2.591	4.651	2.41	20.000
	NBLDG20	497,485.60	4,991,293.97	283.07	8.61E-05	2.591	4.651	2.41	20.000
	NBLDG21	497,491.84	4,991,286.16	283.01	8.61E-05	2.591	4.651	2.41	20.000
	NBLDG22	497,496.17	4,991,277.16	282.95	8.61E-05	2.591	4.651	2.41	20.000
	NBLDG23	497,500.40	4,991,268.10	282.86	8.61E-05	2.591	4.651	2.41	20.000
	SBLDG1	497,426.24	4,991,037.50	279.11	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG2	497,435.79	4,991,040.46	279.31	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG3	497,445.34	4,991,043.42	279.43	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG4	497,454.89	4,991,046.38	279.65	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG5	497,464.44	4,991,049.34	279.83	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG6	497,474.00	4,991,052.30	279.88	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG7	497,483.55	4,991,055.27	280.01	7.81E-05	2.628	4.651	2.444	20.000

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 421 of 672

Permit ID	AERMOD ID	Easting [m]	Northing [m]	Base Elev [m]	Emission Rate (lb/hr)	Height [m]	Lateral dimension [m]	Vertical dimension [m]	Length_X [m]
FUGI 3	SBLDG8	497,493.10	4,991,058.23	280.18	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG9	497,502.65	4,991,061.19	280.31	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG10	497,512.20	4,991,064.15	280.32	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG11	497,521.86	4,991,066.00	280.29	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG12	497,531.80	4,991,064.90	280.27	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG13	497,541.74	4,991,063.79	280.22	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG14	497,549.69	4,991,057.89	280.26	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG15	497,556.70	4,991,050.97	280.37	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG16	497,561.65	4,991,042.28	280.44	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG17	497,566.38	4,991,033.49	280.48	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG18	497,569.44	4,991,023.97	280.62	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG19	497,572.50	4,991,014.45	280.73	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG20	497,575.56	4,991,004.93	280.74	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG21	497,578.61	4,990,995.41	280.73	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG22	497,581.67	4,990,985.89	280.73	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG23	497,584.73	4,990,976.37	280.6	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG24	497,587.79	4,990,966.84	280.41	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG25	497,590.84	4,990,957.32	280.37	7.81E-05	2.628	4.651	2.444	20.000
	SBLDG26	497,593.90	4,990,947.80	280.39	6.00E-05	2.628	4.651	2.444	20.000
	SBLDG27	497,596.96	4,990,938.28	280.49	6.00E-05	2.628	4.651	2.444	20.000
	SBLDG28	497,600.02	4,990,928.76	280.5	6.00E-05	2.628	4.651	2.444	20.000
	SBLDG29	497,603.07	4,990,919.24	280.66	6.00E-05	2.628	4.651	2.444	20.000
	SBLDG30	497,606.13	4,990,909.72	280.86	6.00E-05	2.628	4.651	2.444	20.000
	SBLDG31	497,609.19	4,990,900.20	280.91	4.38E-05	2.628	4.651	2.444	20.000
	SBLDG32	497,610.96	4,990,890.61	280.91	4.38E-05	2.628	4.651	2.444	20.000
	SBLDG33	497,606.68	4,990,882.39	281.17	4.38E-05	2.628	4.651	2.444	20.000
	SBLDG34	497,598.18	4,990,877.12	281.31	4.38E-05	2.628	4.651	2.444	20.000

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

Permit ID	AERMOD ID	Easting [m]	Northing [m]	Base Elev [m]	Emission Rate (lb/hr)	Height [m]	Lateral dimension [m]	Vertical dimension [m]	Length_X [m]
FUGI 3	SBLDG35	497,589.51	4,990,872.22	281.22	4.38E-05	2.628	4.651	2.444	20.000
	SBLDG36	497,580.01	4,990,869.07	281.17	4.38E-05	2.628	4.651	2.444	20.000
	SBLDG37	497,570.52	4,990,865.92	281.04	4.38E-05	2.628	4.651	2.444	20.000
	SBLDG38	497,561.03	4,990,862.78	280.95	4.38E-05	2.628	4.651	2.444	20.000
	SBLDG39	497,551.54	4,990,859.63	280.72	4.38E-05	2.628	4.651	2.444	20.000
	SBLDG40	497,542.05	4,990,856.48	280.59	4.38E-05	2.628	4.651	2.444	20.000
	SBLDG41	497,532.56	4,990,853.33	280.53	4.38E-05	2.628	4.651	2.444	20.000
	SBLDG42	497,523.06	4,990,850.18	280.55	4.38E-05	2.628	4.651	2.444	20.000
	SBLDG43	497,513.45	4,990,849.29	280.53	4.38E-05	2.628	4.651	2.444	20.000
	SBLDG44	497,503.81	4,990,851.78	280.5	4.38E-05	2.628	4.651	2.444	20.000
	SBLDG45	497,494.75	4,990,855.56	280.51	4.38E-05	2.628	4.651	2.444	20.000
	SBLDG46	497,485.14	4,990,852.82	280.47	4.38E-05	2.628	4.651	2.444	20.000
	SBLDG47	497,564.36	4,990,944.84	281.03	1.04E-04	2.628	4.651	2.444	20.000
	SBLDG48	497,573.84	4,990,948.00	280.92	1.04E-04	2.628	4.651	2.444	20.000
	SBLDG49	497,583.33	4,990,951.17	280.62	1.04E-04	2.628	4.651	2.444	20.000
	SBLDG50	497,580.96	4,990,897.97	281.11	1.04E-04	2.628	4.651	2.444	20.000
SBLDG51	497,590.41	4,990,901.26	281.31	1.04E-04	2.628	4.651	2.444	20.000	
SBLDG52	497,599.85	4,990,904.55	281.31	1.04E-04	2.628	4.651	2.444	20.000	

Appendix D. Emission factors for lead processing units

Table D.1 below specifies the emission factors to be used in calculation of stack and fugitive emissions from lead processing units as required by the permit. The permit also requires recurring performance testing at each stack to verify emission factors to be used in calculation of stack and fugitive emissions from each lead processing unit. The Permittee shall keep this appendix up to date with emission factors derived from the most-recent MPCA-approved performance test results.

Table D.1: List of emission factors for lead processing units

Emission Unit ID	Emission Unit Description	Nederman ID	Smog Hog ID	Stack/Vent ID	Uncontrolled PM (lb/lb Lead-Containing Material)	Uncontrolled PM10/PM2.5 (lb/lb Lead-Containing Material)	Uncontrolled Lead (lb/lb Lead-Containing Material)	Controlled Lead ¹ (lb/lb Lead-Containing Material)
EQUI 101	CF Scrap Re-Melt Pot	TREA 60	TREA 1	STRU 1	3.37x10 ⁻⁴	3.41x10 ⁻⁴	1.05x10 ⁻⁷	4.46x10 ⁻⁸
EQUI 102	Small Re-Melt Pot	TREA 60	TREA 1	STRU 1	3.37x10 ⁻⁴	3.41x10 ⁻⁴	1.28x10 ⁻⁷	4.46x10 ⁻⁸
EQUI 103	Doe Run Melt Pot	TREA 60	TREA 1	STRU 1	3.37x10 ⁻⁴	3.41x10 ⁻⁴	1.28x10 ⁻⁷	4.46x10 ⁻⁸
EQUI 104	CF Re-Melt Pot	TREA 60	TREA 1	STRU 1	3.37x10 ⁻⁴	3.41x10 ⁻⁴	1.28x10 ⁻⁷	4.46x10 ⁻⁸
EQUI 121	Die Cast (DC09)	TREA 61	TREA 25	STRU 15	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 122	Die Cast (DC12)	TREA 61	TREA 25	STRU 15	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 123	Die Cast (DC33)	TREA 61	TREA 25	STRU 15	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 124	Die Cast (DC14)	TREA 63	TREA 26	STRU 16	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 125	Die Cast (DC15)	TREA 63	TREA 26	STRU 16	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 126	Die Cast (DC21)	TREA 62	TREA 26	STRU 16	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 127	Die Cast (DC08)	TREA 64	TREA 27	STRU 17	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 128	Die Cast (DC10)	TREA 64	TREA 27	STRU 17	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 129	Die Cast (DC17)	TREA 64	TREA 27	STRU 17	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 130	Die Cast (DC18)	TREA 65	TREA 78	STRU 74	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 131	Die Cast (DC36)	TREA 65	TREA 78	STRU 74	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 132	Die Cast (DC37)	TREA 66	TREA 30	STRU 20	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 133	Die Cast (DC25)	TREA 66	TREA 30	STRU 20	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 134	Die Cast (DC22)	TREA 67	TREA 79	STRU 75	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 135	Die Cast (DC35)	TREA 67	TREA 79	STRU 75	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 136	Die Cast (DC32)	TREA 68	TREA 33	STRU 23	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 137	Die Cast (DC26)	TREA 69	TREA 34	STRU 24	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 138	Die Cast (DC27)	TREA 69	TREA 34	STRU 24	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 139	Die Cast (DC16)	TREA 70	TREA 35	STRU 25	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 140	Die Cast (DC28)	TREA 70	TREA 35	STRU 25	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 141	Die Cast (DC29)	TREA 71	TREA 36	STRU 26	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 142	Die Cast (DC19)	TREA 72	TREA 36	STRU 26	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 143	Die Cast (DC34)	TREA 71	TREA 36	STRU 26	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 146	Die Cast (DC42)	TREA 73	TREA 39	STRU 30	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 147	Die Cast (DC38)	TREA 74	TREA 40	STRU 31	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 149	Die Cast (DC40)	TREA 75	TREA 41	STRU 32	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 150	Die Cast (DC48)	TREA 75	TREA 41	STRU 32	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 424 of 672

Emission Unit ID	Emission Unit Description	Nederman ID	Smog Hog ID	Stack/Vent ID	Uncontrolled PM (lb/lb Lead-Containing Material)	Uncontrolled PM10/PM2.5 (lb/lb Lead-Containing Material)	Uncontrolled Lead (lb/lb Lead-Containing Material)	Controlled Lead ¹ (lb/lb Lead-Containing Material)
EQUI 152	Die Cast (DC41)	TREA 76	TREA 42	STRU 33	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 153	Die Cast (DC44)	TREA 77	TREA 43	STRU 34	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 154	Die Cast (DC45)	TREA 77	TREA 43	STRU 34	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 155	Die Cast (DC52)	TREA 72	TREA 36	STRU 26	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 156	Die Cast (DC50)	TREA 76	TREA 42	STRU 33	1.89x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 157	Die Cast (DC51)	TREA 62	TREA 26	STRU 16	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 158	Die Cast (DC53)	TREA 73	TREA 39	STRU 30	1.95x10 ⁻⁴	1.95x10 ⁻⁴	2.15x10 ⁻⁶	6.13x10 ⁻⁷
EQUI 160	Billet Saw	N/A	N/A	STRU 35	4.41x10 ⁻⁶	2.25x10 ⁻⁶	4.41x10 ⁻⁶	4.41x10 ⁻⁶
EQUI 221	Tin Melt Pot	TREA 60	TREA 1	STRU 1	3.37x10 ⁻⁴	3.41x10 ⁻⁴	N/A	N/A

Commented [A43]: This is a typo. It should be 1.95E-4 like the other DC machines.

¹ At the time of permit issuance, the emission factors in Table D.1 are based on recent applicable stack tests at the inlet to emission stacks or control equipment and are applied to similar process equipment. For diecast operations, capture efficiency to the inlet of control equipment is assumed to be 95 percent and therefore the measured emission factors at the inlet of the pollution control equipment must be divided by 0.95 to represent the total uncontrolled emissions. The die casting uncontrolled emission factors in table D.1 represent this correction to the stack testing measurements at the inlet of the control equipment. After die casting stack tests are conducted, emission factors will be updated here and in recordkeeping calculations.

Appendix E. Performance test operating conditions and recordkeeping

1. VOC and particulate matter stack testing for UV coaters (STRU 73 or at each individual coater). This protocol applies if the Permittee wishes to revise the approved emission factors for spray UV coaters in Appendix B.

1.1 Pollutants and emission rates

- 1.1.1 Test for total particulate matter, and report as grains per dry standard cubic foot and pounds per hour. Testing must include organic and inorganic condensable particulate matter. For testing controlled emissions, each test run must be at least two hours in duration. The test method must be approved as part of the test plan.
- 1.1.2 Test for PM₁₀, and report results as an emission rate, in pound PM₁₀ per hour, and as an emission factor, in pound PM₁₀ per pound of coating (as applied) as described in Section 1.4.1.2. This test should be done concurrently with the test for PM_{2.5} and must include organic and inorganic condensable particulate matter. For testing controlled emissions, each test run must be at least two hours in duration. The test method must be approved as part of the test plan.
- 1.1.3 Test for PM_{2.5}, and report results as an emission rate, in pound PM_{2.5} per hour, and as an emission factor, in pound PM_{2.5} per pound of coating (as applied) as described in Section 1.4.2.2. This test should be done concurrently with the test for PM₁₀ and must include organic and inorganic condensable particulate matter. For testing controlled emissions, each test run must be at least two hours in duration. The test method must be approved as part of the test plan.
- 1.1.4 Test for VOC, and report as pound VOC per hour and pound VOC per pound of coating (as applied). The test method must be approved as part of the test plan.
- 1.1.5 Test for overall control efficiency of control equipment if testing of controlled emissions at the unit level is conducted instead of testing for controlled emissions at the stack (STRU 73). If the test results for controlled emissions are below detection limits, the detection limit will not be used to determine compliance with the control efficiency. Rather, the compliance demonstration will be deemed undetermined due to detection limits. The permittee will continue to use the efficiency listed in Appendix B. The test method must be approved as part of the test plan.

1.2 Operating conditions

- 1.2.1 If possible, only UV coaters should be operated during the VOC and particulate matter test if conducted at the stack (STRU 73).
- 1.2.2 During the VOC test, no 1,2-(trans-) Dichloroethylene VOC coating operations may occur.
- 1.2.3 If testing at STRU 73, the coating room must be operated during the test in compliance with pressure drop limits, door status, and proper operation of the alarm system.
- 1.2.4 If testing an individual coater, the permittee must submit a test plan for approval for the sampling location and configuration to ensure the controlled and uncontrolled emissions are properly sampled at the individual coater.
- 1.2.5 The Permittee shall target worst-case conditions to be allowed by the permit, including coating application rate and coating solids content.

1.3 Operating records

The following operating records shall be recorded, including calculations, during the time of each test run:

- 1.3.1 The amount of UV coating applied, in pound per hour, during each test run for each coater in operation.
- 1.3.2 The total amount of UV coating applied, in pound per hour, during each test run.

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 426 of 672

- 1.3.3 Type of parts being coated by each coater during the test.
- 1.3.4 If testing at STRU 73, during the particulate test, list the other coating operations running at the time of the test.
- 1.3.5 If testing at STRU 73, during the VOC test, list the other coating operations running at the time of the test, including operating rates.
- 1.3.6 If testing at STRU 73, pressure drop readings in the coating room, the door status, and daily alarm verification. The report must include reports of any deviation from the approved minimum pressure drop and door status at the beginning and end of each test run, and if an alarm is triggered during any test run.
- 1.3.7 The specific UV coating applied during the test.
- 1.3.8 If testing for control efficiency or controlled emission factor, the conditions of operation of control equipment based on required permit operating parameters for the control equipment.

1.4 Test results

- 1.4.1 Controlled PM₁₀ emissions test results must include condensable particulate matter.
 - 1.4.1.1 If measurements of controlled emissions are conducted for individual emission units and are above detection levels, the results must be reported as an emissions rate, in pounds per hour, and as emission factor, in pound PM₁₀ per pound of coating (as applied).
 - 1.4.1.2 If measurements of controlled emissions are conducted at the stack (STRU 73) and are above detection levels, the results must be reported as an emissions rate, in pounds PM₁₀ per hour. If the only coaters operating at the time of the test were UV coaters, the results must also be expressed as an emission factor, in pound PM₁₀ per pound of coating (as applied).
- 1.4.2 The results of controlled emissions of PM_{2.5} must include condensable particulate matter.
 - 1.4.2.1 If measurements of controlled emissions are conducted for individual emission units are above detection levels, the results must be reported as an emissions rate, in pounds per hour, and as an emission factor, in pound PM_{2.5} per pound coating (as applied).
 - 1.4.2.2 If measurements of controlled emissions are conducted at the stack (STRU 73) are above detection levels, the results must be reported as an emissions rate, in pounds PM_{2.5} per hour. If the only coaters operating at the time of the test were UV coaters, the results must also be expressed as an emission factor, in pound PM_{2.5} per pound of coating (as applied).
- 1.4.3 The results of PM₁₀ uncontrolled emissions testing at the unit must include condensable particulate matter, and must be reported as an emissions rate, in pounds per hour, and as an emission factor, in pound PM₁₀ per pound of coating (as applied).
- 1.4.4 The results of PM_{2.5} uncontrolled emissions at the unit must include condensable particulate matter and must be reported as an emissions rate, in pounds per hour, and as an emission factor, in pound PM_{2.5} per pound of coating (as applied).
- 1.4.5 If the test is conducted at the emission unit and measurements of controlled emissions are above detection limits, the overall control efficiency must be reported, as percent overall control efficiency. If the measurements of controlled emissions are below detection limits, the overall efficiency as must be reported as undetermined. If tested controlled efficiency is undetermined, the permittee shall continue to use the efficiency listed in Appendix B.

2. Particulate matter and 1,2-(trans-) Dichloroethylene stack testing of 1,2-(trans-) Dichloroethylene VOC spray coaters (STRU 73). The 1,2-(trans-) Dichloroethylene VOC protocol applies only if the Permittee wishes to revise the approved emission factors for 1,2-(trans-) Dichloroethylene VOC coaters in Appendix B. The PM₁₀ and PM_{2.5}

test protocol applies if the Permittee wishes to revise the approved emission factors for spray 1,2-(trans-) Dichloroethylene VOC coaters in Appendix B.

2.1 Pollutants and emission rates

- 2.1.1 Test for total particulate matter, and report as grains per dry standard cubic foot and pounds per hour. Testing must include organic and inorganic condensable matter. For testing controlled emissions, each test run must be at least two hours in duration. The test method must be approved as part of the test plan.
- 2.1.2 Test for PM₁₀, and report results as an emission rate, in pound PM₁₀ per hour, as a transfer efficiency based on test results of uncontrolled emissions, and as an emissions factor, in pound PM₁₀ per pound of solids (as applied), as described in Section 2.4.1.2. This test should be done concurrently with the test for PM_{2.5}. It must include organic and inorganic condensable matter. For testing controlled emissions, each test run must be at least two hours in duration. The test method must be approved as part of the test plan.
- 2.1.3 Test for PM_{2.5}, and report results as an emission rate, in pound PM_{2.5} per hour, a transfer efficiency based on test results of uncontrolled emissions, and an emission factor, in pound PM_{2.5} per pound of solids (as applied), as described in Section 2.4.2.2. This test should be done concurrently with the test for PM₁₀. It must include organic and inorganic condensable matter. For testing controlled emissions, each test run must be at least two hours in duration. The test method must be approved as part of the test plan.
- 2.1.4 1,2-(trans-) Dichloroethylene, in pound per hour and pound VOC per pound of coating (as applied), as measured by the stack test method that speciates for 1,2-(trans-) Dichloroethylene. The test method must be approved as part of the test plan.
- 2.1.5 If 1,2-(trans-) Dichloroethylene VOC stack test is conducted at STRU 73, the Continuous Emission Monitor System (CEMS) emissions shall be reported as a concentration, in parts per million wet THC, parts per million wet 1,2-(trans-) Dichloroethylene (show conversion based on molecular weights), and pound per hour 1,2-(trans-) Dichloroethylene by using measured concentrations and measured flue gas rates during the test. The CEMS measurements must specifically measure concentration during the time of each of the stack test runs conducted that speciates for 1,2-(trans-) Dichloroethylene.
- 2.1.6 Test for overall control efficiency of control equipment if testing of controlled emissions at the unit level is conducted instead of testing for controlled emissions at the stack (STRU 73). If the test results for controlled emissions are below detection limits, the detection limit will not be used to determine compliance with the control efficiency. Rather, the compliance demonstration will be deemed undetermined due to detection limits. The permittee will continue to use the efficiency listed in Appendix B. The test method must be approved as part of the test plan.

2.2 Operating Conditions

- 2.2.1 If possible, only 1,2-(trans-) Dichloroethylene coaters should be operated during the test if the test is conducted at STRU 73.
- 2.2.2 If possible, all operational 1,2-(trans-) Dichloroethylene spray coaters must be online at the time of the test and the applied coatings must represent the highest range of solid content used.
- 2.2.3 If testing at STRU 73, the coating rooms must be operated during the test in compliance with pressure drop limits, door status, and proper operation of the alarm system.

- 2.2.4 If testing an individual coater, the permittee must submit a test plan for approval for the sampling location and configuration to ensure the uncontrolled and controlled emissions are properly sampled at the individual coater.
- 2.2.5 The Permittee shall target worst-case conditions of emissions rates allowed by the permit.

2.3 Operating records

The following operating records shall be recorded during the time of each testing run, including calculations:

- 2.3.1 Identification of each of the 1,2-(trans-) Dichloroethylene coaters in operation during the test, specifying the type of coater in operation (spray or dip/drip).
- 2.3.2 The amount of 1,2-(trans-) Dichloroethylene coating applied, in pound per hour, by each of the spray coaters operating during the test.
- 2.3.3 The total amount of 1,2-(trans-) Dichloroethylene coating applied by spraying, in pound per hour, during the test.
- 2.3.4 The amount of 1,2-(trans-) Dichloroethylene coating applied, in pound per hour, by each of the dip/drip coaters operating during the test.
- 2.3.5 Type of parts being coated by each coater during the test.
- 2.3.6 If testing at STRU 73, list the other non-1,2-(trans-) Dichloroethylene coating operations running at the time of the test.
- 2.3.7 If testing at STRU 73, pressure drop readings in the coating room, the door status, and daily alarm verification. The report must also include records any deviation from the approved minimum pressure drop, and door status at the beginning and end of each test run, and if an alarm is triggered during any test run.

2.4 Test results

- 2.4.1 Controlled PM₁₀ emissions test results must include condensable particulate matter.
 - 2.4.1.1 If measurements of controlled emissions are conducted for individual emission units and emissions measure above detection levels, the results must be reported as an emissions rate, in pounds per hour, and as an emission factor, in pound PM₁₀ per pound of solids (as applied).
 - 2.4.1.2 If measurements of controlled emissions are conducted at the stack STRU 73 and measurements are above detection levels, the results must be reported as an emissions rate, in pounds PM₁₀ per hour. If 1,2-(trans-) Dichloroethylene spray coaters are the only emission units being operated, the results must also be expressed as an emission factor, in pound PM₁₀ per pound of solids (as applied).
- 2.4.2 Controlled PM_{2.5} emissions test results must include condensable particulate matter
 - 2.4.2.1 If measurements of controlled emissions are conducted for individual emission units and emissions measure above detection levels, the results must be reported as an emissions rate, in pounds PM_{2.5} per hour, and as an emission factor, in pound PM_{2.5} per pound of solids (as applied).
 - 2.4.2.2 If measurements of controlled emissions are conducted at the stack STRU 73 and emissions measure above detection levels, the results must be reported as an emissions rate, in pounds PM_{2.5} per hour. If 1,2-(trans-) Dichloroethylene spray coaters are the only emission units being operated, the results must also be expressed as an emission factor, in pounds PM_{2.5} per pound of solids (as applied).
- 2.4.3 Uncontrolled PM₁₀ emissions measured at the unit level must include condensable particulate matter. The results must be reported as an emissions rate, in pounds PM₁₀ per hour, as a transfer

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 429 of 672

efficiency based on test results, and as an emission factor, in pounds PM₁₀ per pound of solids (as applied).

- 2.4.4 Uncontrolled PM_{2.5} emissions measured at the unit level must include condensable particulate matter. The results must be reported as an emissions rate, in pounds PM₁₀ per hour, as a transfer efficiency based on test results, and as an emission factor, in pounds PM₁₀ per pound of solids (as applied).
 - 2.4.5 If the test is conducted at the emission unit and measurements of controlled emissions are above detection limits, the permittee shall report the overall control efficiency, as percent overall control efficiency. If the measurements of controlled emissions are below detection limits, the permittee shall report the overall efficiency as undetermined. If tested controlled efficiency is undetermined, the permittee shall continue to use the efficiency listed in Appendix B.
 - 2.4.6 If testing for control efficiency or controlled emission factor, the conditions of operation of control equipment based on required permit operating parameters for the control equipment.
 - 2.4.7 The results of the 1,2-(trans-) Dichloroethylene stack test must be reported as an emissions rate, in pounds per hour, and in pound 1,2-(trans-) Dichloroethylene per pound of 1,2-(trans-) Dichloroethylene coating (as applied).
 - 2.4.8 The results of the concurrent CEM measurements shall be reported as described in Section 2.1.5 above.
- 3. Particulate matter stack testing for water-based spray coaters (STRU 73 or at each individual coater). The protocol applies if the Permittee wishes to revise the approved emission factors for water-based coaters in Appendix B. The PM₁₀ and PM_{2.5} test protocol applies if the Permittee wishes to revise the approved emission factors for spray 1,2-(trans-) Dichloroethylene VOC coaters in Appendix B.**
- 3.1 Pollutants and emission rates
- 3.1.1 Test for total particulate matter, and report as grains per dry standard cubic foot and as a pound per hour. Testing must include organic and inorganic condensable matter. For testing controlled emissions, each test run must be at least two hours in duration. The test method must be approved as part of the test plan.
 - 3.1.2 Test for PM₁₀, and report results as an emission rate, in pound PM₁₀ per hour, as a transfer efficiency based on test results of uncontrolled emission, and as an emission factor in pound PM₁₀ per pound of solids (as applied) as described in Section 3.4.1.2. This test should be done concurrently with the test for PM_{2.5}. It must include organic and inorganic condensable matter. For testing of controlled emissions, each test run must be two hours in duration. The test method must be approved as part of the test plan.
 - 3.1.3 Test for PM_{2.5}, and report results as an emission rate, in pound PM_{2.5} per hour and as a transfer efficiency based on test results of uncontrolled emissions, and as an emission factor in pound PM_{2.5} per pound of solids (as applied), as described in Section 3.4.2.2. This test should be done concurrently with the test for PM₁₀. It must include organic and inorganic condensable matter. The test method must be approved as part of the test plan.
 - 3.1.4 Test for overall control efficiency of control equipment if testing of controlled emissions at the unit is conducted instead of testing for controlled emissions at the stack (STRU 73). If the test results for controlled emissions are below detection limits, the detection limit will not be used to determine compliance with the control efficiency. Rather, the compliance demonstration will be deemed undetermined due to detection limits. If the test results are underdetermined, the permittee will

continue to use the efficiency listed in Appendix B. The test method must be approved as part of the test plan.

3.2 Operating Conditions

- 3.2.1 If possible, only water-based spray coaters should be operated during the test if conducted at STRU 73.
- 3.2.2 If possible, all operational water-based spray coaters must be online at the time of the test and the applied coatings must represent the highest range of solid content used.
- 3.2.3 If testing at STRU 73, the coating room must be operated during the test in compliance with pressure drop limits, door status, and proper operation of the alarm system.
- 3.2.4 If testing an individual coater, the permittee must submit a test plan for approval for the sampling location and configuration to ensure the controlled and uncontrolled emissions are properly sampled at the individual coater.
- 3.2.5 The Permittee shall target worst-case conditions to be allowed by the permit, including coating application rates and coating solids content.

3.3 Operating records

The following operating records shall be recorded during the time of each testing run, including calculations:

- 3.3.1 Identification of each water-based spray coater in operation during the test.
- 3.3.2 The amount of water-based coating applied, in pound per hour, by each of the coaters operating during the test.
- 3.3.3 The total amount of water-based coating applied, in pound per hour, during the test.
- 3.3.4 The solids content in the applied coatings for each coater, in weight percent, and the total amount of solids applied per hour for each coater during each test run.
- 3.3.5 The total amount of water-based coating solids applied, in pound per hour, during the test.
- 3.3.6 Type of parts being coated by each coater during the test.
- 3.3.7 If testing at STRU 73, list the other non-spray coating operations running at the time of the test.
- 3.3.8 If testing at STRU 73, the pressure drop readings in the coating room, the door status, and daily alarm verification. The report must also include records any deviation from the approved minimum pressure drop, and door status at the beginning and end of each test run, and if an alarm is triggered during any test run.
- 3.3.9 If testing for control efficiency or controlled emission factor, the conditions of operation of control equipment based on required permit operating parameters for the control equipment.

3.4 Test results

- 3.4.1 Controlled PM₁₀ emissions test results must include condensable particulate matter.
 - 3.4.1.1 If measurements of controlled emissions are conducted for individual emission units and measured emissions are above detection levels, the results must be reported as an emissions rate, in pounds per hour, and as emission factor in pound PM₁₀ per pound of solids by spray coating (as applied).
 - 3.4.1.2 If measurements of controlled emissions are conducted at the stack STRU 73 and are above detection level, the results must be reported as an emissions rate, in pounds PM₁₀ per hour. If the only coaters operating at the time of the test were water-based spray coaters, the results must also be expressed as an emission factor in pound PM₁₀ per pound of solids by spray coating (as applied).

- 3.4.2 Controlled PM_{2.5} emissions test results must include condensable particulate matter.
 - 3.4.2.1 If measurements of controlled emissions are conducted for individual emission units and are above detection level, the results must be reported as an emissions rate, in pounds per hour, and as an emission factor in pound PM_{2.5} per pound of solids by spray coating (as applied).
 - 3.4.2.2 If measurements of controlled emissions are conducted at the stack STRU 73 and are above detection level, the results must be reported as an emissions rate, in pounds PM_{2.5} per hour. If the only coaters operating at the time of the test were water-based spray coaters, the results must also be expressed as an emission factor in pound PM_{2.5} per pound of solids by spray coating (as applied).
- 3.4.3 The results of PM₁₀ uncontrolled emissions at the unit level must include condensable particulate matter and must be reported as an emissions rate, in pounds per hour, as a transfer efficiency based on test results, and as emission factor in pound PM₁₀ per pound of solids by spray coating (as applied).
- 3.4.4 Uncontrolled PM_{2.5} emissions measured at the unit level must include condensable particulate matter. The results must be reported as an emissions rate, in pounds PM₁₀ per hour, as a transfer efficiency based on test results, and as an emission factor, in pounds PM₁₀ per pound of solids (as applied).
- 3.4.5 If the test is conducted at the emission unit and measurements of controlled emissions are above detection limits, the permittee shall report the overall control efficiency, as percent overall control efficiency. If the measurements of controlled emissions are below detection limits, the permittee shall report the overall efficiency as undetermined. If tested controlled efficiency is undetermined, the permittee shall continue to use the efficiency listed in Appendix B.

4. Particulate matter stack testing for all coating operations at STRU 73. This protocol applies if the Permittee wishes to verify compliance with the emission limit at STRU 73 while operating a combination of coater types.

4.1 Pollutants and emission rates

- 4.1.1 Test for total particulate matter, and report as grains per dry standard cubic foot and pounds per hour. Each test run must be at least two hours in duration. Testing must include organic and inorganic condensable matter. The test method must be approved as part of the test plan.
- 4.1.2 Test for PM₁₀, and report results as an emission rate, in pound PM₁₀ per hour. This test should be done concurrently with the test for PM_{2.5}. It must include organic and inorganic condensable matter. Each test run must be at least two hours in duration. The test method must be approved as part of the test plan.
- 4.1.3 Test for PM_{2.5}, and report results as an emission rate, in pound PM_{2.5} per hour. This test should be done concurrently with the test for PM₁₀. It must include organic and inorganic condensable matter. Each test run must be at least two hours in duration. The test method must be approved as part of the test plan.

4.2 Operating Conditions

- 4.2.1 If possible, all authorized coaters normally in operation must be online at the time of the test.
- 4.2.2 The required pollution control equipment must be operated under conditions representative of normal operation.
- 4.2.3 The coating room must be operated during the test in compliance with pressure drop limits, door status, and proper operation of the alarm system.

- 4.2.4 The Permittee shall target worst-case conditions to be allowed by the permit, including spray coating application rates and coating solids content.

4.3 Operating records

The following operating records shall be recorded during the time of each testing run, including calculations:

- 4.3.1 Identification of each water-based spray coater in operation during the test.
- 4.3.2 The amount of water-based coating applied by spraying, in pound per hour, by each of the coaters operating during the test.
- 4.3.3 The total amount of water-based coating applied by spraying, in pound per hour, during the test.
- 4.3.4 The solids content in the applied coatings for each water-based spray coater, in weight percent, and the total amount of solids applied per hour for each water spray coater during each test run.
- 4.3.5 The total amount of water-based coating solids applied, in pound per hour, during the test.
- 4.3.6 Type of parts being coated by each water-based spray coater during the test.
- 4.3.7 Identification of each water-based dip/drip coater in operation during the test.
- 4.3.8 The amount of water-based coating applied by dip/drip, in pound per hour, by each of the coaters operating during the test.
- 4.3.9 The total amount of water-based coating applied by dip/drip, in pound per hour, during the test.
- 4.3.10 Identification of each 1,2-(trans-) Dichloroethylene spray coater in operation during the test.
- 4.3.11 The amount of 1,2-(trans-) Dichloroethylene coating applied by spraying, in pound per hour, by each of the coaters operating during the test.
- 4.3.12 The total amount of 1,2-(trans-) Dichloroethylene coating applied by spraying, in pound per hour, during the test.
- 4.3.13 The solids content in the applied 1,2-(trans-) Dichloroethylene coatings for each spray coater, in weight percent, and the total amount of solids applied per hour for each coater during each test run.
- 4.3.14 The total amount of 1,2-(trans-) Dichloroethylene coating solids applied by spraying during the test, in pound per hour, during the test.
- 4.3.15 Type of parts being spray coated by each 1,2-(trans-) Dichloroethylene spray coater during the test.
- 4.3.16 Identification of each 1,2-(trans-) Dichloroethylene dip/drip coater in operation during the test.
- 4.3.17 The amount of 1,2-(trans-) Dichloroethylene coating applied by dip/drip, in pound per hour, by each of the 1,2-(trans-) Dichloroethylene dip/drip coaters operating during the test.
- 4.3.18 The total amount of 1,2-(trans-) Dichloroethylene coating applied by dip/drip, in pound per hour, during the test.
- 4.3.19 Identification of each UV spray coater in operation during the test.
- 4.3.20 The amount of UV coating applied, in pound per hour, during each test run for each UV coater in operation.
- 4.3.21 The total amount of UV coating applied, in pound per hour, during each test run.
- 4.3.22 Type of parts being coated with UV coating during each test run.
- 4.3.23 Pressure drop readings in the coating room, the door status, and daily alarm verification. The report must also include records any deviation from the approved minimum pressure drop, and door status at the beginning and end of each test run, and if an alarm is triggered during any test run.
- 4.3.24 (If applicable) Document the condition of the control equipment for each spray coater operating during the test, including, but not limited to, Stage 1 and Stage 2 filter pressure drop.

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 433 of 672

4.4 Test results

- 4.4.1 The results of the test must be reported as an emissions rate, in pounds per hour.
- 4.4.2 The Permittee shall calculate total PM₁₀ and PM_{2.5} emissions of all coating units operating during the test using the calculation methods described elsewhere in this permit.
- 4.4.3 If the test results are above detection limits, the measured emissions during the test shall be compared to the total emissions calculated based on the compliance methods prescribed in the permit. If the total calculated emissions are equal to or higher than the measured emissions, the permittee will continue to use the emission calculations methods prescribed in this permit. If measured emissions are higher than the total calculated emissions, the permittee must submit a plan to revise emission factors within 30 days of receiving the Notice of Compliance.
- 4.4.4 If the test results are below detection limits, the detection limit will not be used to determine compliance with the emission limit at STRU 73 and the test results will be deemed to be undetermined. If the test results are undetermined, the test will be repeated after 60 months when more spray coating emission units are operational.

5. Particulate matter stack testing for lead processing units

5.1 Pollutants and emission rates

- 5.1.1 Test for PM₁₀ at the inlet (prior to control equipment) and outlet (exiting the stack), and report as an emission rate, in pound PM₁₀ per hour, and as an emission factor, in pound PM₁₀ per mass throughput. This test should be done concurrently with the test for PM_{2.5}. Testing must include organic and inorganic condensable particulate matter. The test method must be approved as part of the test plan.
- 5.1.2 Test for PM_{2.5} at the inlet (prior to control equipment) and outlet (exiting the stack), and report as an emission rate, in pound PM_{2.5} per hour, and as an emission factor, in pound PM_{2.5} per mass throughput. This test should be done concurrently with the test for PM₁₀. Testing must include organic and inorganic condensable particulate matter. The test method must be approved as part of the test plan.
- 5.1.3 Test for overall control efficiency of control equipment train, if applicable.

5.2 Operating Conditions

- 5.2.1 During each test run, all the emission units emitting through the stack being tested must be operated.
- 5.2.2 If possible, all authorized lead processing units and other sources of PM₁₀ and PM_{2.5} must be operated at the capacity authorized by the permit.
- 5.2.3 The pollution control equipment must be operated under conditions representative of normal operation.
- 5.2.4 The Permittee shall target worst-case conditions to be allowed by the permit, including processing rates for lead processing units and other sources of PM₁₀ and PM_{2.5}. If this is not attained, the Permittee shall scale up reported emission rates, in pound per hour, to represent the capacity and maximum process rates allowed by the permit in order to show compliance with the applicable emission limit(s) and verify emission factor(s).

5.3 Operating records.

The following operating records shall be recorded for during the time of each testing run, including calculations:

- 5.3.1 Total process throughput for each lead processing unit and other sources of PM₁₀ and PM_{2.5} being tested during each test run.
 - 5.3.1.1 For emission units physically ducted to specific control equipment and/or stack, report the total process throughput of each lead processing unit and other PM₁₀ and PM_{2.5} source operated during the test.
 - 5.3.1.2 For emission units operating in a room in which fugitive emissions vent to building fans/vents, report the total process throughput of each lead processing unit and other PM₁₀ and PM_{2.5} source operating in that room.
- 5.3.2 Documentation showing the electrostatic precipitator (Smog Hog) associated with the lead processing unit was operating at the time of the test.
- 5.3.3 Pressure drop across the Stage 1 and Stage 2 filters associated with the lead processing unit was operating at the time of the test.
- 5.3.4 Document the condition of the Stage 1 and Stage 2 filters based on required permit operating parameters for the filters.

5.4 Test Results

The test results must be calculated and reported as follows:

- 5.4.1 Inlet mass rate of PM₁₀ and PM_{2.5} prior to the pollution control equipment, in pound PM₁₀/PM_{2.5} per hour.
- 5.4.2 Outlet mass rate of PM₁₀ and PM_{2.5} exiting the stack, in pound PM₁₀/PM_{2.5} per hour.
- 5.4.3 Overall control efficiency of the control equipment train used during the test.
- 5.4.4 Uncontrolled emission factor, reported as pound PM₁₀/PM_{2.5} per mass throughput.
- 5.4.5 Controlled emission factor, reported as pound PM₁₀/PM_{2.5} per mass throughput.

6. Lead stack testing for lead processing units

6.1 Pollutants and emission rates

- 6.1.1 Test for lead at the inlet (prior to control equipment) and outlet (exiting the stack), and report as an emission rate, pound lead per hour, and as an emission factor, in pound lead per mass throughput. This test should be done concurrently with the test for PM₁₀ and PM_{2.5}. The test method must be approved as part of the test plan.

6.2 Operating Conditions

- 6.2.1 During the tests, all emission units emitting through the stack being tested must be in operation.
- 6.2.2 If possible, all authorized lead processing units must be operated at the capacity authorized by the permit.
- 6.2.3 The pollution control equipment must be operated under conditions representative of normal operation.
- 6.2.4 The Permittee shall target worst-case conditions to be allowed by the permit, including processing rates for lead-processing units. If this is not attained, the Permittee shall scale up reported emission rates, in pound per hour, to represent the capacity and maximum process rates allowed by the permit in order to show compliance with the applicable emission limit(s) and verify emission factor(s).

- 6.3 Operating records. The following operating records shall be recorded during the time of each testing run, including calculations:

- 6.3.1 Total process throughput for each lead-processing unit being tested during each test run.
 - 6.3.1.1 For emission units physically ducted to specific control equipment and/or stack, report the process throughput of each lead-processing unit operated during the test as well as the total process throughput of all lead-processing unit venting to the tested control equipment train or stack outlet at the time of the test.
 - 6.3.1.2 For emission units operating in a room in which fugitive emissions vent to building fans/vents, report the process throughput of each lead-processing unit operating in that room as well as the total process throughput of all lead-processing unit operating in that room at the time of the test.
- 6.3.2 Documentation showing the electrostatic precipitator (Smog Hog) associated with the lead processing unit was operating at the time of the test.
- 6.3.3 Pressure drop across the Stage 1 and Stage 2 filters in each Nederman filter. associated with the lead processing unit was operating at the time of the test.
- 6.3.4 Document the condition of the Stage 1 and Stage 2 filters based on required permit operating parameters for the filters.

6.4 Test results

The test results must be calculated and reported as follows:

- 6.4.1 Inlet mass rate of lead prior to the pollution control equipment, in pound lead per hour.
- 6.4.2 Outlet mass rate of lead exiting the stack, in pound lead per hour.
- 6.4.3 Overall control efficiency of the control equipment train used during the test.
- 6.4.4 Uncontrolled emission factor, expressed as pound lead per massthroughput.
- 6.4.5 Controlled emission factor, expressed as pound lead per mass throughput.

Table E.1: Performance Test Limits and Recordkeeping Items

Subject Item	Stack Description (Associated Emission Units)	Short-Term Throughput Limits with Target Rates, Process Parameters and Special Considerations for Test Plans.	Throughput Limits and Control Equipment Parameters to monitor during testing	Control Equipment Operating Parameters
STRU 1	Smog Hog #15 Stack (EQUIs 101, 102, 103, 104, and 221)	Process Throughput \leq 9,920 pounds per hour	Track individual unit process throughput and total process throughput for EQUIs 101, 102, 103, and 104 for each test run. TREA 1 Operation of the Continuous Parameter Monitoring System (CPMS) TREA 60 Pressure Drop	COMG 11: Control Efficiency for PM/ PM ₁₀ /PM _{2.5} \geq 97 percent control efficiency Control Efficiency for Lead \geq 86 percent control efficiency TREA 1: CPMS operating and recording properly TREA 60: Stage 1 Filter Pressure Drop \geq 0.0001 and \leq 0.600 kilopascal Stage 2 Filter Pressure Drop \geq 0.0001 and \leq 0.800 kilopascal
STRU 15	Smog Hog #1 Stack (EQUIs 121, 122, and 123)	Process Throughput \leq 1,565 pounds per hour	Track individual unit process throughput and total process throughput for EQUIs 121, 122, and 123 for each test run. TREA 25 Operation of the Continuous Parameter Monitoring System (CPMS) TREA 61 Pressure Drop	COMG 12: Control Efficiency for PM/ PM ₁₀ /PM _{2.5} \geq 86.6 percent control efficiency TREA 25: CPMS operating and recording properly TREA 61: Stage 1 Filter Pressure Drop \geq 0.0001 and \leq 0.600 kilopascal Stage 2 Filter Pressure Drop \geq 0.0001 and \leq 0.800 kilopascal
STRU 16	Smog Hog #2 Stack (EQUIs 124, 125, 126, and 157)	Process Throughput \leq 1,265 pounds per hour	Track individual unit process throughput and total process throughput for EQUIs 124, 125, 126 and 157 for each test run. TREA 26 Operation of the Continuous Parameter Monitoring System (CPMS) TREAs 62 and 63 Pressure Drop	COMG 12: Control Efficiency for PM/ PM ₁₀ /PM _{2.5} \geq 86.6 percent control efficiency TREA 26: CPMS operating and recording properly TREAs 62 and 63: Stage 1 Filter Pressure Drop \geq 0.0001 and \leq 0.600 kilopascal Stage 2 Filter Pressure Drop \geq 0.0001 and \leq 0.800 kilopascal
STRU 17	Smog Hog #3 Stack (EQUIs 127, 128, and 129)	Process Throughput \leq 750 pounds per hour	Track individual unit process throughput and total process throughput for EQUIs 127, 128, and 129 for each test run. TREA 27 Operation of the Continuous	COMG 12: Control Efficiency for PM/ PM ₁₀ /PM _{2.5} \geq 86.6 percent control efficiency TREA 27: CPMS operating and recording properly TREA 64: Stage 1 Filter Pressure Drop \geq 0.0001 and \leq 0.600 kilopascal

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 437 of 672

Subject Item	Stack Description (Associated Emission Units)	Short-Term Throughput Limits with Target Rates, Process Parameters and Special Considerations for Test Plans.	Throughput Limits and Control Equipment Parameters to monitor during testing	Control Equipment Operating Parameters
			Parameter Monitoring System (CPMS) TREA 64 Pressure Drop	Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascal
STRU 74	Smog Hog #5 Stack (EQUs 130 and 131)	Process Throughput ≤ 839.0 pounds per hour	Track individual unit process throughput and total process throughput for EQUs 130 and 131 for each test run. TREA 78 Operation of the Continuous Parameter Monitoring System (CPMS) TREA 65 Pressure Drop	COMG 12: Control Efficiency for PM/ PM ₁₀ /PM _{2.5} ≥ 86.6 percent control efficiency TREA 78: CPMS operating and recording properly TREA 65: Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascal Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascal
STRU 20	Smog Hog #6 Stack (EQUs 132 and 133)	Process Throughput ≤ 1015 pounds per hour	Track individual unit process throughput and total process throughput for EQUs 132 and 133 for each test run. TREA 30 Operation of the Continuous Parameter Monitoring System (CPMS) TREA 66 Pressure Drop	COMG 12: Control Efficiency for PM/ PM ₁₀ /PM _{2.5} ≥ 86.6 percent control efficiency TREA 30: CPMS operating and recording properly TREA 66: Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascal Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascal
STRU 75	Smog Hog #8 Stack (EQUI 134 and 135)	Process Throughput ≤ 1347 pounds per hour	Track process throughput at EQUI 134 for each test run. TREA 79 Operation of the Continuous Parameter Monitoring System (CPMS) TREA 67 Pressure Drop	COMG 12: Control Efficiency for PM/ PM ₁₀ /PM _{2.5} ≥ 86.6 percent control efficiency TREA 67: Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascal TREA 79: CPMS operating and recording properly Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascal
STRU 23	Smog Hog #9 Stack (EQUI 136)	Process Throughput ≤ 894.0 pounds per hour	Track process throughput at EQUI 136 for each test run. TREA 33 Operation of the Continuous Parameter Monitoring System (CPMS) TREA 68 Pressure Drop	COMG 12: Control Efficiency for PM/ PM ₁₀ /PM _{2.5} ≥ 86.6 percent control efficiency TREA 33: CPMS operating and recording properly TREA 68: Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascal

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 438 of 672

Subject Item	Stack Description (Associated Emission Units)	Short-Term Throughput Limits with Target Rates, Process Parameters and Special Considerations for Test Plans.	Throughput Limits and Control Equipment Parameters to monitor during testing	Control Equipment Operating Parameters
				Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascal
STRU 24	Smog Hog #10 Stack (EQUIs 137 and 138)	Process Throughput ≤ 340.0 pounds per hour	Track individual unit process throughput and total process throughput for EQUIs 137 and 138 for each test run. TREA 34 Operation of the Continuous Parameter Monitoring System (CPMS) TREA 69 Pressure Drop	COMG 12: Control Efficiency for PM/ PM ₁₀ /PM _{2.5} ≥ 86.6 percent control efficiency TREA 34: CPMS operating and recording properly TREA 69: Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascal Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascal
STRU 25	Smog Hog #11 Stack (EQUIs 139 and 140)	Process Throughput ≤ 886.0 pounds per hour	Track individual unit process throughput and total process throughput for EQUIs 139, 140, and 141 for each test run. TREA 35 Operation of the Continuous Parameter Monitoring System (CPMS) TREA 70 Pressure Drop	COMG 12: Control Efficiency for PM/ PM ₁₀ /PM _{2.5} ≥ 86.6 percent control efficiency TREA 35: CPMS operating and recording properly TREA 70: Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascal Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascal
STRU 26	Smog Hog #12 Stack (EQUIs 141, 142, 143, and 155)	Process Throughput ≤ 2221 pounds per hour	Track individual unit process throughput and total process throughput for EQUIs 142, 143, and 155 for each test run. TREA 36 Operation of the Continuous Parameter Monitoring System (CPMS) TREAs 71 and 72 Pressure Drop	COMG 12: Control Efficiency for PM/ PM ₁₀ /PM _{2.5} ≥ 86.6 percent control efficiency TREA 36: CPMS operating and recording properly TREAs 71 and 72: Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascal Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascal
STRU 30	Smog Hog #16 Stack (EQUIs 146 and 158)	Process Throughput ≤ 2433 pounds per hour	Track individual unit process throughput and total process throughput for EQUIs 146 and 158 for each test run. TREA 39 Operation of the Continuous	COMG 12: Control Efficiency for PM/ PM ₁₀ /PM _{2.5} ≥ 86.6 percent control efficiency TREA 39: CPMS operating and recording properly TREA 73: Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascal

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 439 of 672

Subject Item	Stack Description (Associated Emission Units)	Short-Term Throughput Limits with Target Rates, Process Parameters and Special Considerations for Test Plans.	Throughput Limits and Control Equipment Parameters to monitor during testing	Control Equipment Operating Parameters
			Parameter Monitoring System (CPMS) TREA 73 Pressure Drop	Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascal
STRU 31	Smog Hog #17 Stack (EQUI 147)	Process Throughput ≤ 1200 pounds per hour	Track process throughput at EQUIs 147 for each test run. TREA 40 Operation of the Continuous Parameter Monitoring System (CPMS) TREA 74 Pressure Drop	COMG 12: Control Efficiency for PM/ PM ₁₀ /PM _{2.5} ≥ 86.6 percent control efficiency TREA 40: CPMS operating and recording properly TREA 74: Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascal Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascal
STRU 32	Smog Hog #18 Stack (EQUIs 149 and 150)	Process Throughput ≤ 1210 pounds per hour	Track individual unit process throughput and total process throughput for EQUIs 149 and 150 for each test run. TREA 41 Operation of the Continuous Parameter Monitoring System (CPMS) TREA 75 Pressure Drop	COMG 12: Control Efficiency for PM/ PM ₁₀ /PM _{2.5} ≥ 86.6 percent control efficiency TREA 41: CPMS operating and recording properly TREA 75: Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascal Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascal
STRU 33	Smog Hog #19 Stack (EQUIs 152 and 156)	Process Throughput ≤ 2160 pounds per hour	Track individual unit process throughput and total process throughput for EQUIs 152 and 156 for each test run. TREA 42 Operation of the Continuous Parameter Monitoring System (CPMS) TREA 76 Pressure Drop	COMG 12: Control Efficiency for PM/ PM ₁₀ /PM _{2.5} ≥ 86.6 percent control efficiency TREA 42: CPMS operating and recording properly TREA 76: Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascal Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascal
STRU 34	Smog Hog #20 Stack (EQUIs 153 and 154)	Process Throughput ≤ 2313 pounds per hour	Track individual unit process throughput and total process throughput for EQUIs 153 and 154 for each test run. TREA 43 Operation of the Continuous	COMG 12: Control Efficiency for PM/PM ₁₀ /PM _{2.5} ≥ 86.6 percent control efficiency TREA 43: CPMS operating and recording properly TREA 77: Stage 1 Filter Pressure Drop ≥ 0.0001 and ≤ 0.600 kilopascal

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 440 of 672

Subject Item	Stack Description (Associated Emission Units)	Short-Term Throughput Limits with Target Rates, Process Parameters and Special Considerations for Test Plans.	Throughput Limits and Control Equipment Parameters to monitor during testing	Control Equipment Operating Parameters
			Parameter Monitoring System (CPMS) TREA 77 Pressure Drop	Stage 2 Filter Pressure Drop ≥ 0.0001 and ≤ 0.800 kilopascal
STRU 35	Smog Hog #21 Stack (EQUI 117)	Process Throughput ≤ 4.95 pounds per hour	Track individual unit process throughput and total process throughput for EQUI 117 for each test run. No control equipment	None
	Smog Hog #21 Stack (EQUI 160)	Process Throughput ≤ 1000 pounds per hour	Track individual unit process throughput and total process throughput for EQUI 160 for each test run. No control equipment	None
STRU 73	Battery Terminal Post Coater Stack (Battery Terminal Post Coaters)	UV Spray Coating ≤ 17.98 pounds per hour VOC/WB Spray Coating ≤ 8.97 pounds per hour	Track individual unit and total coating usage at COMG 2, COMG 4, and COMG 8 for each test run. COMG 14: TREAs 55-59: Daily Inspection as required by permit	TREAs 55-59: Control Efficiency for PM ₁₀ /PM _{2.5} ≥ 99.0 percent control efficiency

Table E.2: EPA Performance Test Methods

Subject Item	Description	Pollutants Tested and Test Methods (or other method approved by MPCA in the performance test plan approval)
STRU 1	Smog Hog #15 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202 Lead: Method 12
STRU 15	Smog Hog #1 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202 Lead: Method 12
STRU 16	Smog Hog #2 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202 Lead: Method 12
STRU 17	Smog Hog #3 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

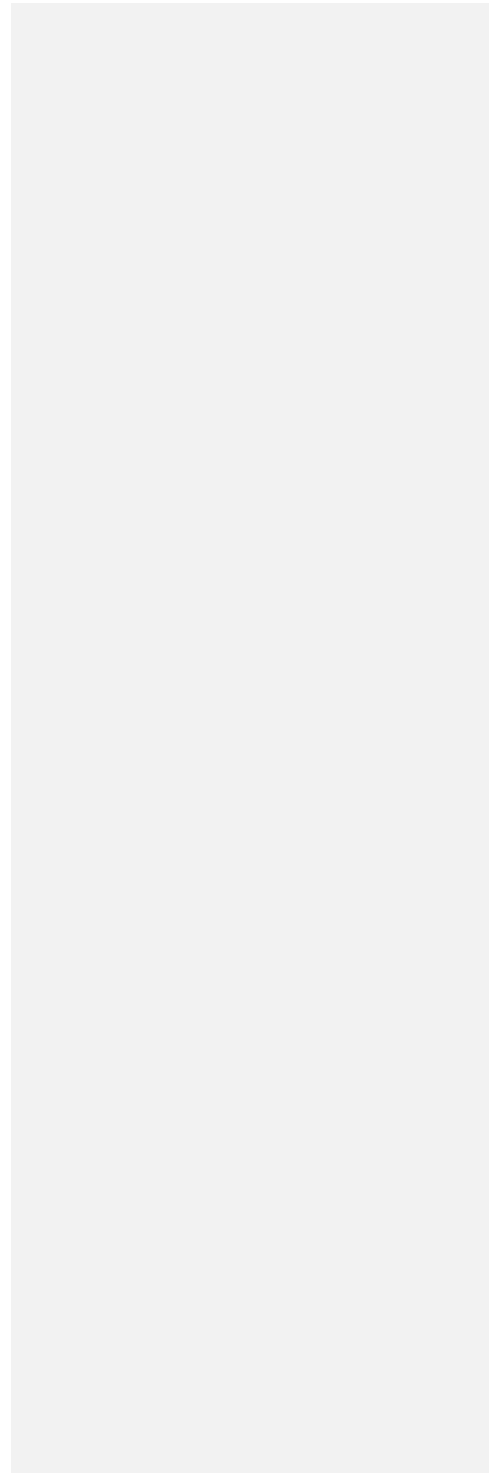
12300341-101
 Page 441 of 672

Subject Item	Description	Pollutants Tested and Test Methods (or other method approved by MPCA in the performance test plan approval)
		Lead: Method 12
STRU 20	Smog Hog #6 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202 Lead: Method 12
STRU 23	Smog Hog #9 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202 Lead: Method 12
STRU 24	Smog Hog #10 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202 Lead: Method 12
STRU 25	Smog Hog #11 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202 Lead: Method 12
STRU 26	Smog Hog #12 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202 Lead: Method 12
STRU 30	Smog Hog #16 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202 Lead: Method 12
STRU 31	Smog Hog #17 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202 Lead: Method 12
STRU 32	Smog Hog #18 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202 Lead: Method 12
STRU 33	Smog Hog #19 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202 Lead: Method 12
STRU 34	Smog Hog #20 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202 Lead: Method 12
STRU 35	Smog Hog #21 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202 Lead: Method 12
STRU 73 (or Individual Spray Coaters)	Battery Terminal Post Coater Stack	VOC: 25A or 320 1,2-(trans-) Dichloroethylene: 25A or 320 PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202
STRU 74	Smog Hog #5 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 442 of 672

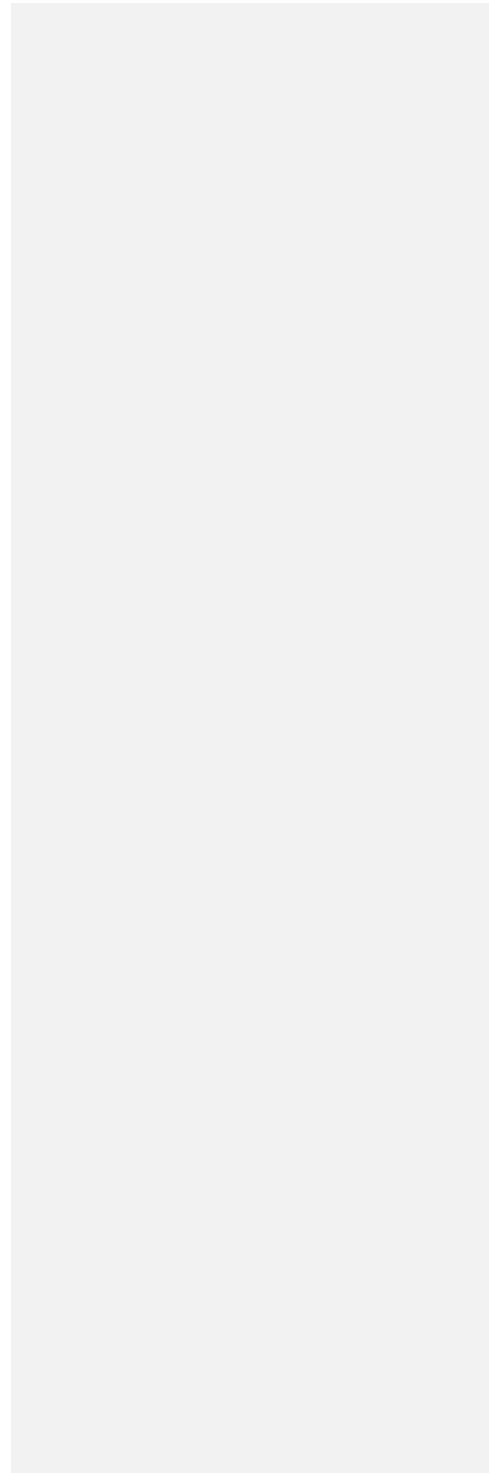
Subject Item	Description	Pollutants Tested and Test Methods (or other method approved by MPCA in the performance test plan approval)
		Lead: Method 12
STRU 75	Smog Hog #8 Stack	PM: Methods 5 and 202 PM ₁₀ : Methods 201A and 202 PM _{2.5} : Methods 201A and 202 Lead: Method 12



Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 443 of 672

Appendix F. VOC ambient air monitoring plan



Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 444 of 672

WENCK File #2606-0009
February 2019

Limited Ambient Air Monitoring Plan

Water Gremlin Company

Prepared for:
Water Gremlin Company

Site Address:
4400 Otter Lake Road
White Bear Township, MN
55110



Prepared by:

WENCK
1802 Wooddale Drive
Woodbury, MN 55125
Phone: 651-294-4580
Fax: 651-228-1969

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 445 of 672

Table of Contents

1.0 PROGRAM OVERVIEW	1-1
2.0 TARGET CHEMICAL	2-1
3.0 MONITORING STATIONS	3-2
4.0 SAMPLING AND ANALYTICAL METHODS	4-1
4.1 Sampling Identification	4-1
4.2 Sampling Frequency	4-1
4.3 Sampling and Analytical Methods.....	4-1
4.3.1 TDCE.....	4-2
4.3.2 Other TO-15 VOCs.....	4-2
4.3.3 Meteorological Data	4-2
4.4 Deviations.....	4-2
5.0 DATA MANAGEMENT	5-1
5.1 Documentation and Recording.....	5-1
5.2 Data Reduction	5-1
5.3 Data Validation	5-1
5.4 Data Reporting	5-2
6.0 REFERENCES.....	6-1

FIGURES

- 1 Site Map - Monitoring Locations

APPENDICES

- A Modeling Figures/Wind Rose Plot
B Exhibit M Forms
C Sampling Schedule
D Pace Analytical Standard Operating Procedures and Method Limits
E Sampling Standard Operating Procedure
F Quality Assurance Project Plan

February 2019

\\wcnk\apps\environmental\office\Technical\2008 - Water\07\0009 - 2019\Consent\Appendices
K012019\Figures\02_21_2019\001\09 VOC Ambient Air Monitoring Plan.docx



1.0 Program Overview

Water Gremlin is a manufacturer of fabricated lead metal products from purchased refined lead material. Battery terminal posts are the primary product, and account for majority of production at the facility. Water Gremlin consists of an existing manufacturing facility at 4400 Otter Lake Road in White Bear Township, MN. Water Gremlin manufacturing operations are currently permitted under State Only Air Emission Permit No. 12300341-003 issued by the Minnesota Pollution Control Agency (MPCA). Uncontrolled emissions from the facility are above the major source thresholds for the Part 70 permit program for Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP), therefore the facility has taken limits on VOCs and Trichloroethylene (TCE) to be a synthetic minor source under the Part 70 program and to retain its State Permit status.

This air permit application is for a major air permit amendment. Water Gremlin is currently operating under Air Quality Permit No. 12300341-003, which was issued on September 22, 2006.

Based on conversations with the MPCA, TCE emissions were identified as a potential health risk based on recent air dispersion modeling screened against the Minnesota Department of Health (MDH) Risk Assessment Advice (RAA) of $2 \mu\text{g}/\text{m}^3$. Water Gremlin is proposing to utilize a new solvent primarily containing trans-1,2-dichloroethylene (TDCE). MDH has developed site-specific RAA for TDCE with a chronic long-term threshold of $70 \mu\text{g}/\text{m}^3$. TDCE toxicity and potential health risk is considerably less when compared with TCE. Water Gremlin is proposing to conduct TDCE sampling to provide confirmatory data to support the assertion that TDCE emissions from the facility would not pose unacceptable risk to human health. Water Gremlin proposes conducting periodic sampling around the facility to collect data in order to characterize ambient air concentrations of TDCE at the site.

Under this Ambient Air Monitoring Plan (AAMP), Water Gremlin will complete a run of sampling events in early 2019 to evaluate ambient concentrations of TDCE. Other VOCs from US EPA's Compendium Method TO-15 (TO-15) will be analyzed along with TDCE. However, TDCE is the only VOC from the facility anticipated to be potentially observed in ambient air. Other TO-15 VOCs could be anticipated in ambient air from background and other nearby VOC sources as well as mobile sources (motor vehicles) given the proximity of roadways to the proposed monitors. Water Gremlin will use the data gathered under this monitoring to evaluate an approach moving forward.

This AAMP was designed in general accordance with United States Environmental Protection Agency (EPA), *Air/Superfund National Technical Guidance Series, Volume IV – Guidance for Ambient Air Monitoring at Superfund Sites (Revised)*, EPA-451/R-93-007, 1993, and MPCA's Exhibit M.

This AAMP identifies:

- Target compound(s) (TDCE and other TO-15 VOCs)
- Number and locations of the monitoring stations,
- Duration and frequency of monitoring,
- Sampling and analytical methods,
- Associated detection limits (DLs),

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 448 of 672

2.0 Target Chemical

The target chemical for this AAMP:

- Trans-1,2-dichloroethylene (TDCE)
- Other TO-15 VOCs

The basis for establishing target chemical list is:

- Request from MPCA to evaluate potential TDCE emissions from the site to ensure no unacceptable risk to human health.

4.0 Sampling and Analytical Methods

The sampling methods selected are based on published, approved US EPA ambient air sampling methods and available sampling technology that is consistent with the objectives of this AAMP.

4.1 SAMPLING IDENTIFICATION

Each collected sample is labeled with an identification number. The sample identification always consists of three components which will be separated by a hyphen. The components that are used to create the unique identification for the sample are as follows:

- Date of the sample collection time period recorded as YYMMDD for 24-hour samples. A sample collected from 10:30am January 29, 2019 through 10:30 am on January 30, 2019 is recorded as 190129.
- Station number where the sample location is collected. A sample collected at the Monitoring Location 1-South is recorded as ML1S.
- US EPA TO-15 method is recorded as TO15.

After the elements of the collected sample have been identified, the sampling technician assembles the sample identification components described above to create the Sample ID for each respective sample. An example of the Sample ID is as follows:

- A sample collected on February 8, 2019 at Monitoring Location 1-South by TO-15 would be identified as Sample ID 190208-ML1S-TO15.

4.2 SAMPLING FREQUENCY

Water Gremlin proposes to sample ambient air for a 24-hour period coinciding with EPA's 3-day schedule with the exception that the sampling will commence mid-morning to mid-morning as opposed to midnight to midnight sampling. This is to accommodate the need for staff to be on-site to initiate sampling and in consideration of safety. Additionally, the proposed locations may not have power readily available to accommodate installing automatic samplers. In order to accommodate travel time between sampling locations, samples will be collected on a slightly staggered schedule.

Samples will be collected over a 24-hour time period and will capture ambient air during manufacturing, including start-up. The sampling will also capture the various daily operating day shifts throughout the day which are as follows:

- 1st – 6:15 – 2:45 pm
- 2nd – 2:15 – 10:45 pm
- 3rd – 10:15 – 6:45 am

The 2019 EPA sampling schedule is included in Appendix C.

4.3 SAMPLING AND ANALYTICAL METHODS

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 452 of 672

US EPA's Compendium Method TO-15 is the sampling and analytical method to be utilized for this AAMP. A Canister Sampling SOP is included in Appendix D. Laboratory SOPs from Pace Analytical are included in Appendix E.

Chemical Group	Sampling & Analytical Method	Target Detection Limit ¹
TDCE	US EPA's Compendium Method TO-15	MDL 0.29 to RL 0.81 $\mu\text{g}/\text{m}^3$

(1) Method Detection Limits (MDLs) and Reporting Limits (RLs) may vary based on factors such as dilution. The detection limit will be whatever is technically capable in accordance with the US EPA approved analytical methods provided by the laboratory. The "examples" shown in the table above represent the general order of magnitude of the detection limits.

4.3.1 TDCE

Water Gremlin will collect TDCE samples in electropolished 6 Liter stainless steel Summa canisters with 24-hour flow controller. The instrumentation and sampling procedures are described in US EPA's Compendium Method TO-15. The TO-15 VOC analysis is performed using Gas Chromatography (GC) with detection limits ranging from 1 to 200 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). Method TO-15 includes specifications for 1) preparation, cleaning, and certification of sampling equipment, 2) sample preservation, transport, and storage, and 3) sample holding times prior to analysis.

Each canister will be individually certified as clean according the Pace Analytical Lab SOP included in Appendix E, so field/travel blanks are not anticipated to be necessary for this sampling.

4.3.2 Other TO-15 VOCs

Other TO-15 VOCs will be analyzed in collected samples as described above. TDCE is the only VOC from the facility anticipated to be potentially observed in ambient air. Other VOCs could be anticipated in ambient air from background and other nearby VOC sources as well as mobile sources (motor vehicles) given the proximity of roadways to the proposed monitors.

The reporting limits and detection limits for the entire TO-15 analyte panel for Pace Analytical Lab is also included in Appendix E.

4.3.3 Meteorological Data

Meteorological data including hourly wind speed, wind direction, and precipitation will be collected from nearby Crystal Airport. Wind rose plots will be created from the meteorological data for each of the 24-hour sampling events.

4.4 DEVIATIONS

Specific deviations noted for documentation are listed below:

- Sample times will be staggered and driven by business hours to accommodate the need for on-site sampling initiation. The sample times are intended to capture a full, continuous day inside the total twenty-four-hour sampling period but vary

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 455 of 672

- Routine checks and procedures,
- Check for internal data consistency, and
- Check for consistency with data collected at the same time, under similar conditions.

Level III validation is not anticipated for this AAMP based on the temporary nature of the sampling.

5.4 DATA REPORTING

MPCA will receive data directly from the laboratory. Additionally, Water Gremlin will evaluate the collected data against the SOPs, standards, and QAPP. Data to be documented and reported include:

- 24-hour average concentration,
- Meteorological data from nearby Crystal Airport,
- Detected concentrations by station and monitoring period,
- Number of collected samples,
- Detection limits
- Exceedances of QAPP criteria, if applicable, and
- Quality Control sample results including method blanks, and lab control spikes/duplicates.

The reports may also provide a narrative discussion and summary of the data set and data quality. Surrogate recoveries are not required by TO-15 and if acceptable, will not be reported. If required, surrogate recoveries can be reported once the laboratory gets a system in place. Calibration verifications and chromatography are raw data that requires a full level 4 data package. Chromatography (and, if acceptable, calibration verifications) will be provided by laboratory upon request from MPCA.

6.0 References

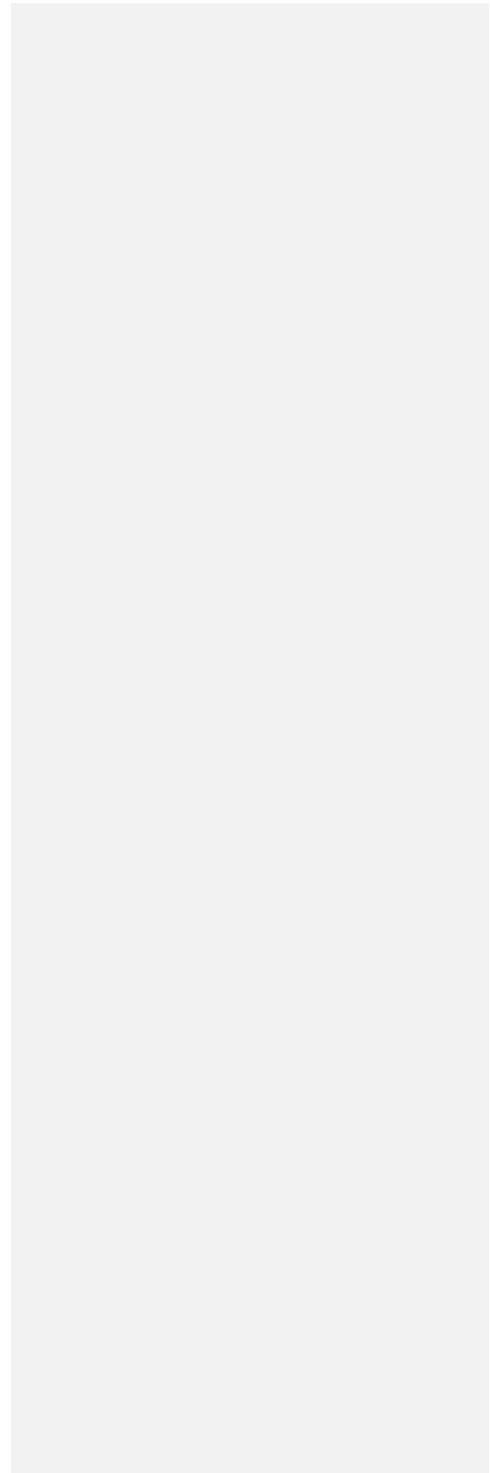
- United States Environmental Protection Agency (US EPA), May 1993. *Air/Superfund National Technical Guidance Series, Volume IV – Guidance for Ambient Air Monitoring at Superfund Sites (Revised)*. EPA-451/R-93-007. Office of Air Quality Planning and Standards Research, Research Triangle Park, NC.
- U.S. Environmental Protection Agency (US EPA), August 1998. *Quality Assurance Handbook for Air Pollution Measurement Systems. Volume II: Part 1. Ambient Air Quality Monitoring Program Quality System Development*.
- U.S. Environmental Protection Agency (US EPA), January 1999. *Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air: Method TO-15, Second Edition*. EPA/625/R-96/010b. Research Triangle Park, NC.
- Pace Analytical Services, LLC. December 2018. *Cleaning, Certification, Leak Checking and Preparation for Shipment of SUMMA Passivated Canisters (ENV-SOP-MIN4-0002)*
- Pace Analytical Services, LLC. October 2018. *Analysis of Whole Air Sample for Volatile Organic Compound by GC/MS EPA TO15/TO14 (ENV-SOP-MIN4-0005)*

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 457 of 672

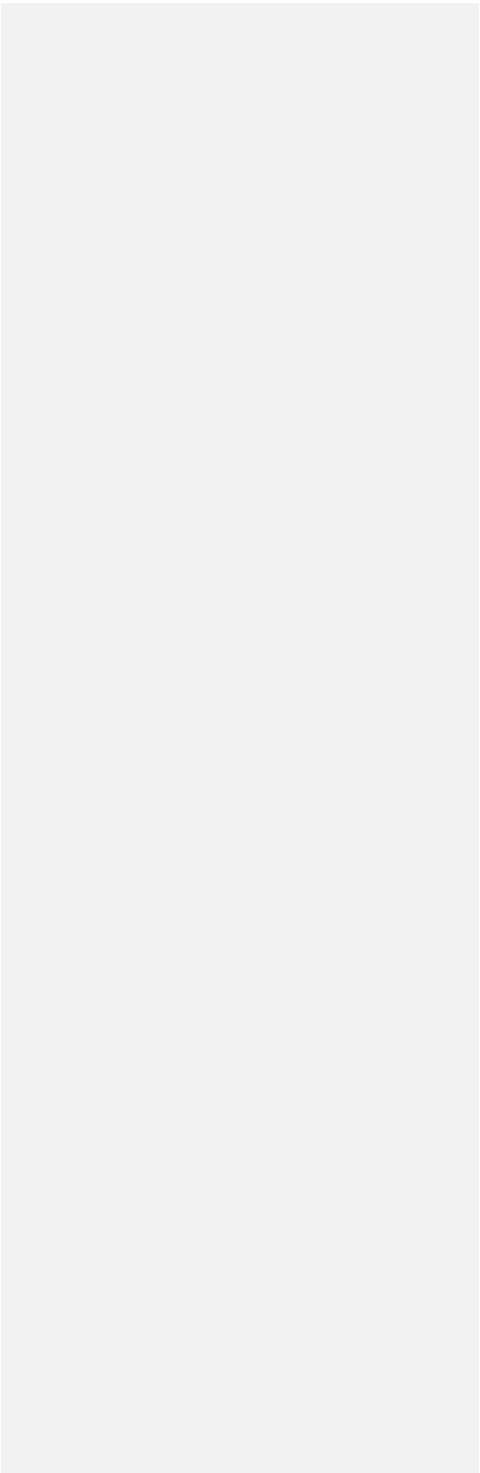
Figures

1. Site Map – Monitoring Locations



Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 458 of 672

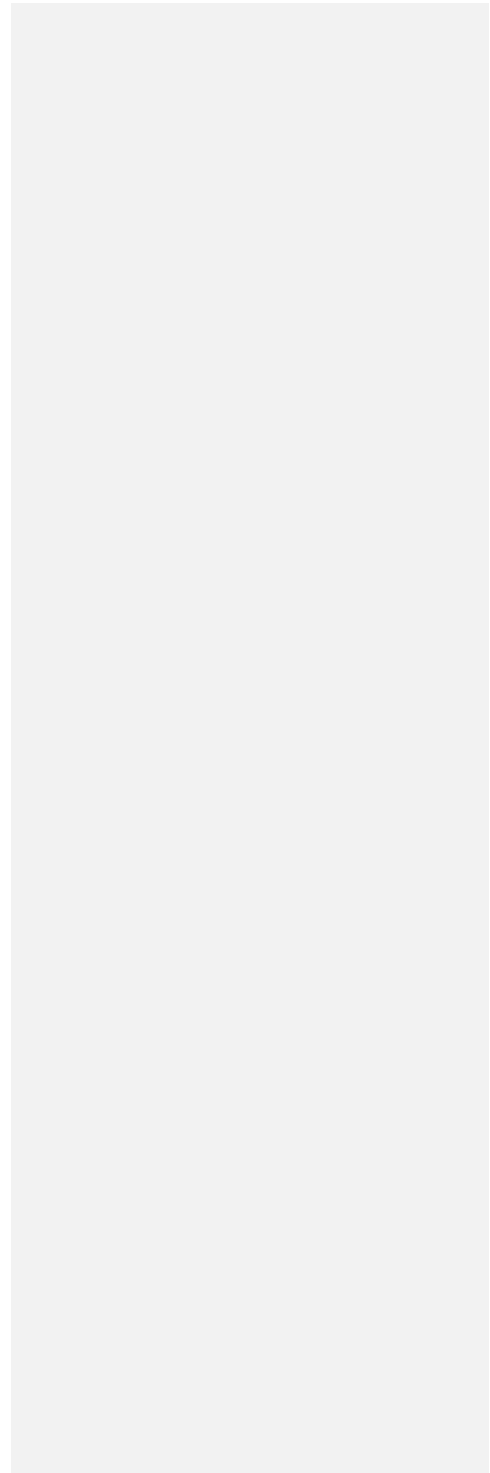


Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 459 of 672

Appendix A

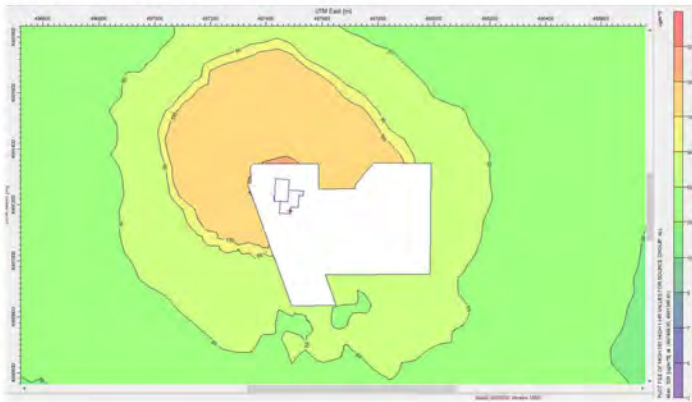
Modeling Figures/Wind Rose Plot



Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 460 of 672

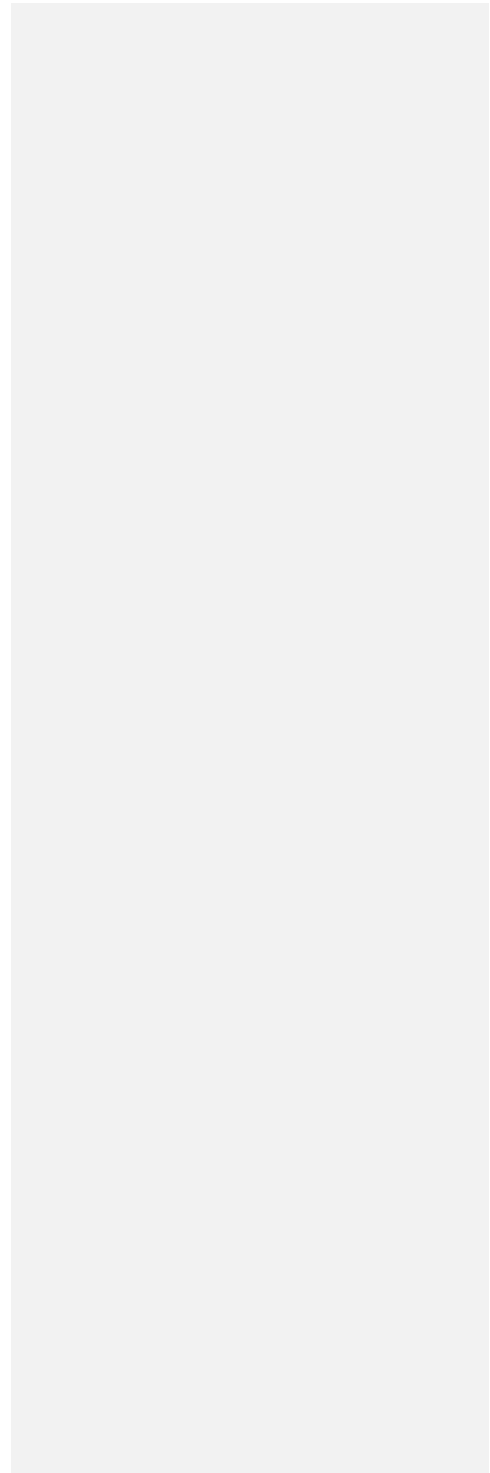
Figure A-1: Preliminary 1-hour Unitized Modeling Results



Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 461 of 672

Figure A-2: Preliminary 24-hour Unitized Modeling Results



Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 462 of 672

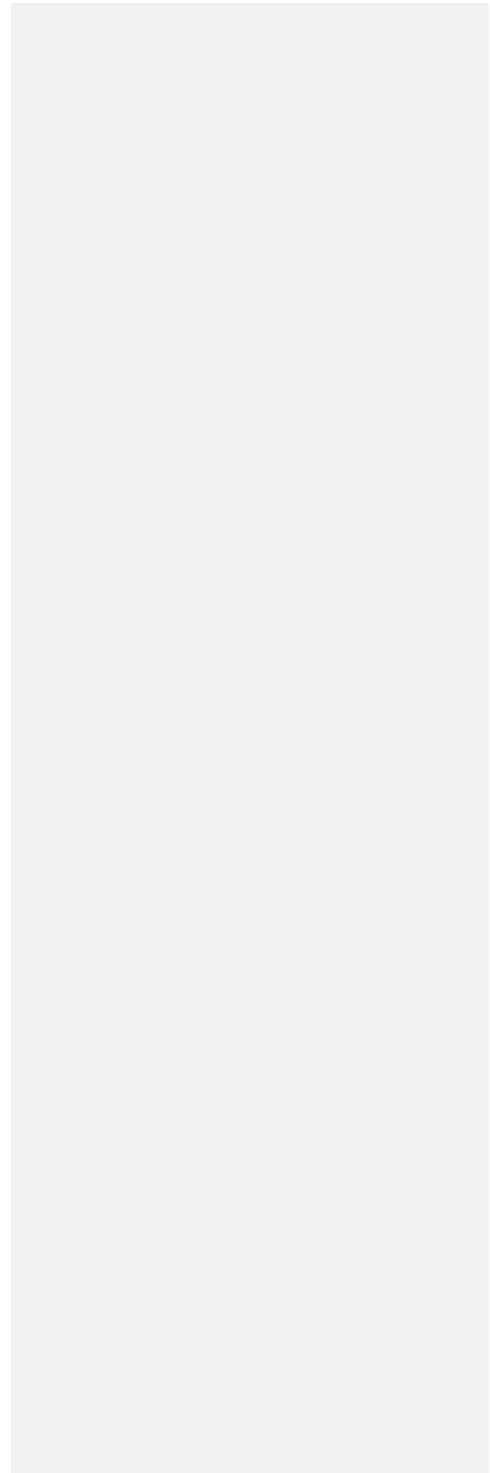
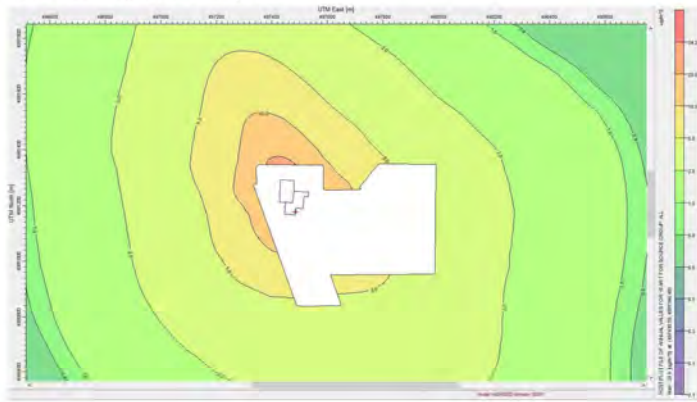
Figure A-3: Preliminary Monthly Unitized Modeling Results



Permit Issued: [month day, year]
Permit Expires: [month day, year]

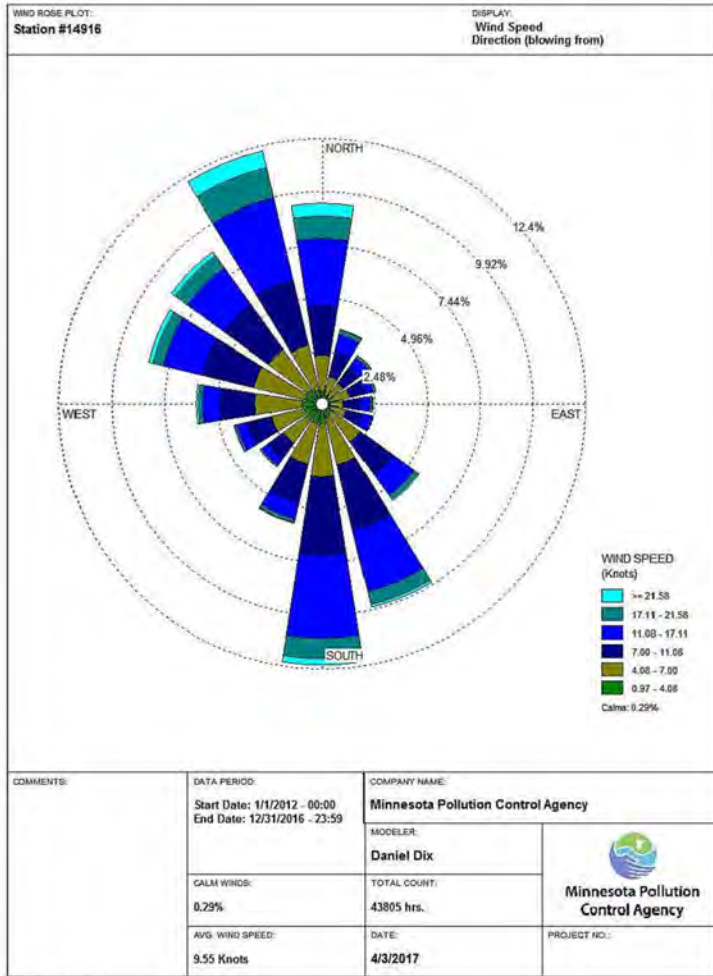
12300341-101
Page 463 of 672

Figure A-4: Preliminary Annual Unitized Modeling Results



Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 464 of 672

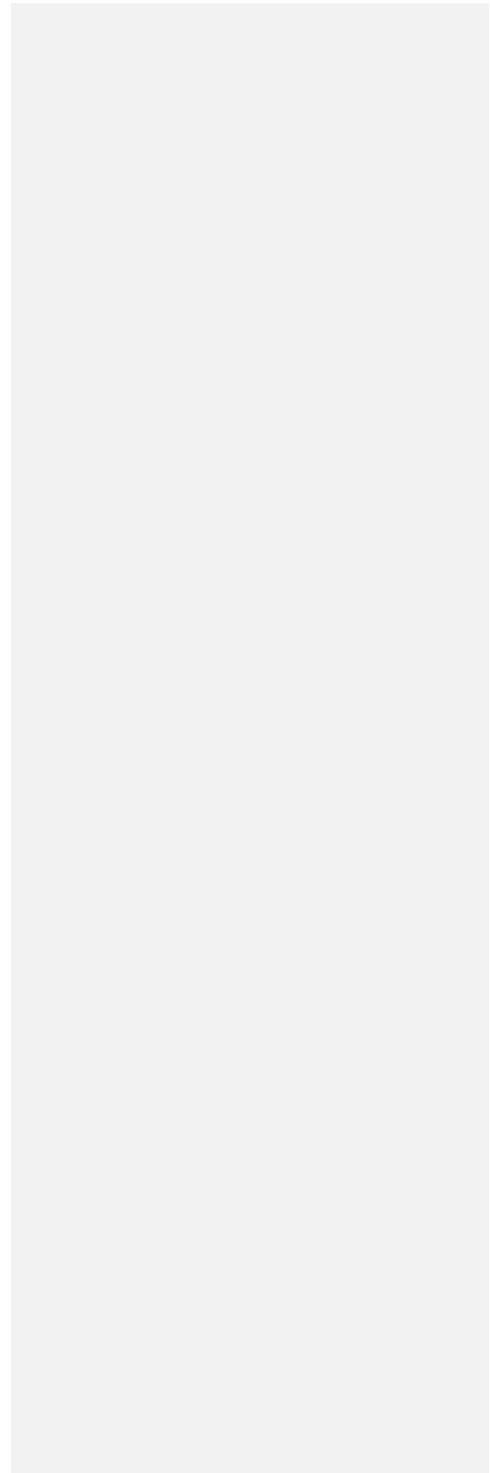


Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 465 of 672

Appendix B

Exhibit M-Forms
1 1 1



Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 466 of 672

Revision 6/20/2017

Ambient Air Monitoring Site Information Form (page 1 of 2)

Site ID #: ML1-S New Change

Date established: February 2019

Date terminated: To be determined

Supporting agency: Wenck (in collaboration with Pace Analytical Services, Inc.)
Street address: 1802 Wooddale Drive
City: Woodbury State: MN Zip code: 55125

Site name: Water Gremlin
Site address: 4400 Otter Lake Road
City: White Bear Twsp State: MN Zip code: 55110 County: Ramsey

Geographical coordinates: fill in either UTM coordinates OR Latitude / Longitude
UTM Coordinates:
Zone: 15 North: 4990974.95 East: 497600.97
Longitude and Latitude:
Latitude: _____ Longitude: _____

Geographical coordinate measurement information:
Method of determination: Google Earth
Estimate of accuracy: Approximately +/- 2m Datum: NAD 83

Elevation (mean sea level)
Elevation: 279.98 Estimate of accuracy: Approximately +/- 2m
Method of determination: Google Earth

Land Use (check one)
Residential Commercial Industrial Agricultural
Forest Desert Mobile Blighted areas

Location Setting (check one)
Rural Suburban Urban & City center

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 467 of 672

Revision 6/20/2017

Ambient Air Monitoring Site Information Form (page 2 of 2)

Meteorological Data

Is meteorological data collected for this site? Yes No

If yes, is it collected at this site or at another site? This site Another site

If met data is collected at a different site, fill in the following:

Meteorological site ID or name: Crystal Airport

Distance from site to meteorological site: 25 km

Direction from site to meteorological site: West

Street Information

	Name	Type	Direction to Site	Traffic Count*	Year
1.	<u>Otter Lake Road</u>	<u>4</u>	<u>West</u>	<u>8,000</u>	<u>2014</u>
2.	<u>Whitaker Street</u>	<u>5</u>	<u>South</u>	<u>No data</u>	
3.					
4.					

*Annual Daily Average

Type: 1) Arterial 2) Expressway 3) Freeway 4) Major Street 5) Thru Street 6) Local Street

Site Description:

Comments:

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 468 of 672

Revision 6/20/2017

Ambient Air Monitoring Monitor Information Form (page 1 of 2)

New Change

For office use: AQS monitor Id: _____

Site ID: ML1-S Date sampling began: February 2019

Parameter: TDCE Sampling ended: To be determined

Collection laboratory: Pace Analytical Services, Inc.
Site address: 1700 Elm Street SE
City: Minneapolis State: MN Zip code: 55414

Analysis laboratory: Pace Analytical Services, Inc.
Site address: 1700 Elm Street SE
City: Minneapolis State: MN Zip code: 55414

Analyzer manufacturer: N/A
Analyzer model: N/A
Collection and analysis method code: SUMMA Passivated Canister TDCE TO15
Serial #: _____ MPCA Asset #: _____

Project Classification (check one):
 Population-oriented Source Oriented Background Surveillance
 Complain Invest Special Studies Episode Monitoring
 Exposure Studies Duplicate Sampling Continuous Monitoring

Dominant Source (check one):
 Point Area Mobile

Measurement Scale (check one):
 Micro Scale Middle Scale Neighborhood Urban Scale Regional

Monitoring Objective (check one):
 Highest Concentration Population Exposure General Background Source Impact

Monitor Type (check one):
 Unknown SLAMS Other Industrial Index

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 469 of 672

Revision 6/20/2017

Ambient Air Monitoring Monitor Information Form (page 2 of 2)

Probe Location (check one):
 Roof Top Side of Building Support at Ground Level
 Pole Other Top of Tower (met equipment)

Probe height (m): ~1.2-1.5m **Unrestricted Air Flow?** (circle one) Y or **(N)**

24-hour samplers only:

Req. Sampling Frequency: every third day Date effective: 02 / 08 / 2019
_____/_____/_____
_____/_____/_____

For "stratified random", "random", or "seasonal" sampling frequency fill in the number of samples per month:
Jan. ___ Feb. X Mar. X Apr. X May. ___ Jun. ___
Jul. ___ Aug. ___ Sep. ___ Oct. ___ Nov. ___ Dec. ___

Obstructions:

#	Type	Direction	Distance	Height
1	<u>2</u>	<u>SE</u>	<u>6m</u>	<u>varies</u>
2	_____	_____	_____	_____
3	_____	_____	_____	_____

Types: 1. building, 2. trees/bush, 3. ridges, 4. cliffs, 5. structure other than building.
Distance and height in meters. Direction in 8-point compass.

Comments:

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 470 of 672

Revision 6/20/2017

Ambient Air Monitoring Site Information Form (page 1 of 2)

Site ID #: ML2-NW New Change

Date established: February 2019

Date terminated: To be determined

Supporting agency: Wenck (in collaboration with Pace Analytical Services, Inc.)
Street address: 1802 Wooddale Drive
City: Woodbury State: MN Zip code: 55125

Site name: Water Gremlin
Site address: 4400 Otter Lake Road
City: White Bear Twsp State: MN Zip code: 55110 County: Ramsey

Geographical coordinates: fill in either UTM coordinates OR Latitude / Longitude
UTM Coordinates:
Zone: 15 North: 4991327.12 East: 497359.70
Longitude and Latitude:
Latitude: _____ Longitude: _____

Geographical coordinate measurement information:
Method of determination: Google Earth
Estimate of accuracy: Approximately +/- 2m Datum: NAD 83

Elevation (mean sea level)
Elevation: 283.47 Estimate of accuracy: Approximately +/- 2m
Method of determination: Google Earth

Land Use (check one)
Residential Commercial Industrial Agricultural
Forest Desert Mobile Blighted areas

Location Setting (check one)
Rural Suburban Urban & City center

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 471 of 672

Revision 6/20/2017

Ambient Air Monitoring Site Information Form (page 2 of 2)

Meteorological Data

Is meteorological data collected for this site? Yes No

If yes, is it collected at this site or at another site? This site Another site

If met data is collected at a different site, fill in the following:

Meteorological site ID or name: Crystal Airport

Distance from site to meteorological site: 25 km

Direction from site to meteorological site: West

Street Information

	Name	Type	Direction to Site	Traffic Count*	Year
1.	<u>Otter Lake Road</u>	<u>4</u>	<u>West</u>	<u>8,000</u>	<u>2014</u>
2.	<u>Whitaker Street</u>	<u>5</u>	<u>South</u>	<u>No data</u>	
3.					
4.					

*Annual Daily Average

Type: 1) Arterial 2) Expressway 3) Freeway 4) Major Street 5) Thru Street 6) Local Street

Site Description:

Comments:

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 472 of 672

Revision 6/20/2017

Ambient Air Monitoring Monitor Information Form (page 1 of 2)

New Change

For office use: AQS monitor Id: _____

Site ID: ML2-NW Date sampling began: February 2019

Parameter: TDCE Sampling ended: To be determined

Collection laboratory: Pace Analytical Services, Inc.
Site address: 1700 Elm Street SE
City: Minneapolis State: MN Zip code: 55414

Analysis laboratory: Pace Analytical Services, Inc.
Site address: 1700 Elm Street SE
City: Minneapolis State: MN Zip code: 55414

Analyzer manufacturer: N/A
Analyzer model: N/A
Collection and analysis method code: SUMMA Passivated Canister TDCE TO15
Serial #: _____ MPCA Asset #: _____

Project Classification (check one):
 Population-oriented Source Oriented Background Surveillance
 Complain Invest Special Studies Episode Monitoring
 Exposure Studies Duplicate Sampling Continuous Monitoring

Dominant Source (check one):
 Point Area Mobile

Measurement Scale (check one):
 Micro Scale Middle Scale Neighborhood Urban Scale Regional

Monitoring Objective (check one):
 Highest Concentration Population Exposure General Background Source Impact

Monitor Type (check one):
 Unknown SLAMS Other Industrial Index

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 473 of 672

Revision 6/20/2017

Ambient Air Monitoring Monitor Information Form (page 2 of 2)

Probe Location (check one):

Roof Top Side of Building Support at Ground Level
 Pole Other Top of Tower (met equipment)

Probe height (m): ~1.2-1.5m Unrestricted Air Flow? (circle one) Y or **(N)**

24-hour samplers only:

Req. Sampling Frequency: every third day Date effective: 02 / 08 / 2019
_____/_____/_____
_____/_____/_____

For "stratified random", "random", or "seasonal" sampling frequency fill in the number of samples per month:

Jan. ___ Feb. X Mar. X Apr. X May. ___ Jun. ___
Jul. ___ Aug. ___ Sep. ___ Oct. ___ Nov. ___ Dec. ___

Obstructions:

#	Type	Direction	Distance	Height
1	<u>2</u>	<u>E&W</u>	<u>8m</u>	<u>varies</u>
2	_____	_____	_____	_____
3	_____	_____	_____	_____

Types: 1. building, 2. trees/bush, 3. ridges, 4. cliffs, 5. structure other than building.
Distance and height in meters. Direction in 8-point compass.

Comments:

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 474 of 672

Revision 6/20/2017

Ambient Air Monitoring Site Information Form (page 1 of 2)

Site ID #: ML3-E New Change

Date established: February 2019

Date terminated: To be determined

Supporting agency: Wenck (in collaboration with Pace Analytical Services, Inc.)
Street address: 1802 Wooddale Drive
City: Woodbury State: MN Zip code: 55125

Site name: Water Gremlin
Site address: 4400 Otter Lake Road
City: White Bear Twsp State: MN Zip code: 55110 County: Ramsey

Geographical coordinates: fill in either UTM coordinates OR Latitude / Longitude
UTM Coordinates:
Zone: 15 North: 4991255.00 East: 497573.12
Longitude and Latitude:
Latitude: _____ Longitude: _____

Geographical coordinate measurement information:
Method of determination: Google Earth
Estimate of accuracy: Approximately +/- 2m Datum: NAD 83

Elevation (mean sea level)
Elevation: 281.37 Estimate of accuracy: Approximately +/- 2m
Method of determination: Google Earth

Land Use (check one)
Residential Commercial Industrial Agricultural
Forest Desert Mobile Blighted areas

Location Setting (check one)
Rural Suburban Urban & City center

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 475 of 672

Revision 6/20/2017

Ambient Air Monitoring Site Information Form (page 2 of 2)

Meteorological Data

Is meteorological data collected for this site? Yes No

If yes, is it collected at this site or at another site? This site Another site

If met data is collected at a different site, fill in the following:

Meteorological site ID or name: Crystal Airport

Distance from site to meteorological site: 25 km

Direction from site to meteorological site: West

Street Information

	Name	Type	Direction to Site	Traffic Count*	Year
1.	<u>Otter Lake Road</u>	<u>4</u>	<u>West</u>	<u>8,000</u>	<u>2014</u>
2.	<u>Whitaker Street</u>	<u>5</u>	<u>South</u>	<u>No data</u>	
3.					
4.					

*Annual Daily Average

Type: 1) Arterial 2) Expressway 3) Freeway 4) Major Street 5) Thru Street 6) Local Street

Site Description:

Comments:

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 476 of 672

Revision 6/20/2017

Ambient Air Monitoring Monitor Information Form (page 1 of 2)

New Change

For office use: AQS monitor Id: _____

Site ID: ML3-E Date sampling began: February 2019

Parameter: TDCE Sampling ended: To be determined

Collection laboratory: Pace Analytical Services, Inc.
Site address: 1700 Elm Street SE
City: Minneapolis State: MN Zip code: 55414

Analysis laboratory: Pace Analytical Services, Inc.
Site address: 1700 Elm Street SE
City: Minneapolis State: MN Zip code: 55414

Analyzer manufacturer: N/A
Analyzer model: N/A
Collection and analysis method code: SUMMA Passivated Canister TDCE TO15
Serial #: _____ MPCA Asset #: _____

Project Classification (check one):
 Population-oriented Source Oriented Background Surveillance
 Complain Invest Special Studies Episode Monitoring
 Exposure Studies Duplicate Sampling Continuous Monitoring

Dominant Source (check one):
 Point Area Mobile

Measurement Scale (check one):
 Micro Scale Middle Scale Neighborhood Urban Scale Regional

Monitoring Objective (check one):
 Highest Concentration Population Exposure General Background Source Impact

Monitor Type (check one):
 Unknown SLAMS Other Industrial Index

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 477 of 672

Revision 6/20/2017

Ambient Air Monitoring Monitor Information Form (page 2 of 2)

Probe Location (check one):
 Roof Top Side of Building Support at Ground Level
 Pole Other Top of Tower (met equipment)

Probe height (m): ~1.2-1.5m **Unrestricted Air Flow?** (circle one) Y or **(N)**

24-hour samplers only:

Req. Sampling Frequency: every third day Date effective: 02 / 08 / 2019
_____/_____/_____
_____/_____/_____

For "stratified random", "random", or "seasonal" sampling frequency fill in the number of samples per month:
Jan. ___ Feb. X Mar. X Apr. X May. ___ Jun. ___
Jul. ___ Aug. ___ Sep. ___ Oct. ___ Nov. ___ Dec. ___

Obstructions:

#	Type	Direction	Distance	Height
1	<u>2</u>	<u>S & E</u>	<u>10m</u>	<u>varies</u>
2	_____	_____	_____	_____
3	_____	_____	_____	_____

Types: 1. building, 2. trees/bush, 3. ridges, 4. cliffs, 5. structure other than building.
Distance and height in meters. Direction in 8-point compass.

Comments:

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 478 of 672

Revision 6/20/2017

Ambient Air Monitoring Site Information Form (page 1 of 2)

Site ID #: MLA-W New Change

Date established: February 2019

Date terminated: To be determined

Supporting agency: Wenck (in collaboration with Pace Analytical Services, Inc.)
Street address: 1802 Wooddale Drive
City: Woodbury State: MN Zip code: 55125

Site name: Water Gremlin
Site address: 4400 Otter Lake Road
City: White Bear Twsp State: MN Zip code: 55110 County: Ramsey

Geographical coordinates: fill in either UTM coordinates OR Latitude / Longitude
UTM Coordinates:
Zone: 15 North: 4991195.00 East: 497373.00
Longitude and Latitude:
Latitude: _____ Longitude: _____

Geographical coordinate measurement information:
Method of determination: Google Earth
Estimate of accuracy: Approximately +/- 2m Datum: NAD 83

Elevation (mean sea level)
Elevation: 281.25 Estimate of accuracy: Approximately +/- 2m
Method of determination: Google Earth

Land Use (check one)
Residential Commercial Industrial Agricultural
Forest Desert Mobile Blighted areas

Location Setting (check one)
Rural Suburban Urban & City center

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 479 of 672

Revision 6/20/2017

Ambient Air Monitoring Site Information Form (page 2 of 2)

Meteorological Data

Is meteorological data collected for this site? Yes No

If yes, is it collected at this site or at another site? This site Another site

If met data is collected at a different site, fill in the following:

Meteorological site ID or name: Crystal Airport

Distance from site to meteorological site: 25 km

Direction from site to meteorological site: West

Street Information

	Name	Type	Direction to Site	Traffic Count*	Year
1.	<u>Otter Lake Road</u>	<u>4</u>	<u>West</u>	<u>8,000</u>	<u>2014</u>
2.	<u>Whitaker Street</u>	<u>5</u>	<u>South</u>	<u>No data</u>	
3.					
4.					

*Annual Daily Average

Type: 1) Arterial 2) Expressway 3) Freeway 4) Major Street 5) Thru Street 6) Local Street

Site Description:

Comments:

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 480 of 672

Revision 6/20/2017

Ambient Air Monitoring Monitor Information Form (page 1 of 2)

New Change

For office use: AQS monitor Id: _____

Site ID: ML4-W Date sampling began: February 2019

Parameter: TDCE Sampling ended: To be determined

Collection laboratory: Pace Analytical Services, Inc.
Site address: 1700 Elm Street SE
City: Minneapolis State: MN Zip code: 55414

Analysis laboratory: Pace Analytical Services, Inc.
Site address: 1700 Elm Street SE
City: Minneapolis State: MN Zip code: 55414

Analyzer manufacturer: N/A
Analyzer model: N/A
Collection and analysis method code: SUMMA Passivated Canister TDCE TO15
Serial #: _____ MPCA Asset #: _____

Project Classification (check one):
 Population-oriented Source Oriented Background Surveillance
 Complain Invest Special Studies Episode Monitoring
 Exposure Studies Duplicate Sampling Continuous Monitoring

Dominant Source (check one):
 Point Area Mobile

Measurement Scale (check one):
 Micro Scale Middle Scale Neighborhood Urban Scale Regional

Monitoring Objective (check one):
 Highest Concentration Population Exposure General Background Source Impact

Monitor Type (check one):
 Unknown SLAMS Other Industrial Index

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 481 of 672

Revision 6/20/2017

Ambient Air Monitoring Monitor Information Form (page 2 of 2)

Probe Location (check one):

Roof Top Side of Building Support at Ground Level
 Pole Other Top of Tower (met equipment)

Probe height (m): ~1.2-1.5m Unrestricted Air Flow? (circle one) Y or **(N)**

24-hour samplers only:

Reg. Sampling Frequency: every third day Date effective: 02 / 08 / 2019

For "stratified random", "random", or "seasonal" sampling frequency fill in the number of samples per month:

Jan. ___ Feb. X Mar. X Apr. X May. ___ Jun. ___
Jul. ___ Aug. ___ Sep. ___ Oct. ___ Nov. ___ Dec. ___

Obstructions:

#	Type	Direction	Distance	Height
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____

Types: 1. building, 2. trees/brush, 3. ridges, 4. cliffs, 5. structure other than building.
Distance and height in meters. Direction in 8-point compass.

Comments:

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 482 of 672

Revision 6/20/2017

Ambient Air Monitoring Site Information Form (page 1 of 2)

Site ID #: MLS-N New Change

Date established: February 2019

Date terminated: To be determined

Supporting agency: Wenck (in collaboration with Pace Analytical Services, Inc.)
Street address: 1802 Wooddale Drive
City: Woodbury State: MN Zip code: 55125

Site name: Water Gremlin
Site address: 4400 Otter Lake Road
City: White Bear Twsp State: MN Zip code: 55110 County: Ramsey

Geographical coordinates: fill in either UTM coordinates OR Latitude / Longitude

UTM Coordinates:

Zone: 15 North: 4991339.97 East: 497449.97

Longitude and Latitude:

Latitude: _____ Longitude: _____

Geographical coordinate measurement information:

Method of determination: Google Earth

Estimate of accuracy: Approximately +/- 2m Datum: NAD 83

Elevation (mean sea level)

Elevation: 283.22 Estimate of accuracy: Approximately +/- 2m

Method of determination: Google Earth

Land Use (check one)

Residential Commercial _____ Industrial _____ Agricultural _____

Forest _____ Desert _____ Mobile _____ Blighted areas _____

Location Setting (check one)

Rural _____ Suburban Urban & City center _____

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 483 of 672

Revision 6/20/2017

Ambient Air Monitoring Site Information Form (page 2 of 2)

Meteorological Data

Is meteorological data collected for this site? Yes No

If yes, is it collected at this site or at another site? This site Another site

If met data is collected at a different site, fill in the following:

Meteorological site ID or name: Crystal Airport

Distance from site to meteorological site: 25 km

Direction from site to meteorological site: West

Street Information

	Name	Type	Direction to Site	Traffic Count*	Year
1.	<u>Otter Lake Road</u>	<u>4</u>	<u>West</u>	<u>8,000</u>	<u>2014</u>
2.	<u>Whitaker Street</u>	<u>5</u>	<u>South</u>	<u>No data</u>	
3.					
4.					

*Annual Daily Average

Type: 1) Arterial 2) Expressway 3) Freeway 4) Major Street 5) Thru Street 6) Local Street

Site Description:

Comments:

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 484 of 672

Revision 6/20/2017

Ambient Air Monitoring Monitor Information Form (page 1 of 2)

New Change

For office use: AQS monitor Id: _____

Site ID: ML5-N Date sampling began: February 2019

Parameter: TDCE Sampling ended: To be determined

Collection laboratory: Pace Analytical Services, Inc.
Site address: 1700 Elm Street SE
City: Minneapolis State: MN Zip code: 55414

Analysis laboratory: Pace Analytical Services, Inc.
Site address: 1700 Elm Street SE
City: Minneapolis State: MN Zip code: 55414

Analyzer manufacturer: N/A
Analyzer model: N/A
Collection and analysis method code: SUMMA Passivated Canister TDCE TO15
Serial #: _____ MPCA Asset #: _____

Project Classification (check one):
 Population-oriented Source Oriented Background Surveillance
 Complain Invest Special Studies Episode Monitoring
 Exposure Studies Duplicate Sampling Continuous Monitoring

Dominant Source (check one):
 Point Area Mobile

Measurement Scale (check one):
 Micro Scale Middle Scale Neighborhood Urban Scale Regional

Monitoring Objective (check one):
 Highest Concentration Population Exposure General Background Source Impact

Monitor Type (check one):
 Unknown SLAMS Other Industrial Index

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 485 of 672

Revision 6/20/2017

Ambient Air Monitoring Monitor Information Form (page 2 of 2)

Probe Location (check one):
 Roof Top Side of Building Support at Ground Level
 Pole Other Top of Tower (met equipment)

Probe height (m): ~1.2-1.5m **Unrestricted Air Flow?** (circle one) Y or **(N)**

24-hour samplers only:

Req. Sampling Frequency: every third day Date effective: 02 / 08 / 2019

For "stratified random", "random", or "seasonal" sampling frequency fill in the number of samples per month:
Jan. _____ Feb. X Mar. X Apr. X May. _____ Jun. _____
Jul. _____ Aug. _____ Sep. _____ Oct. _____ Nov. _____ Dec. _____

Obstructions:

#	Type	Direction	Distance	Height
1	<u>2</u>	<u>All</u>	<u><5m</u>	<u>varies</u>
2	_____	_____	_____	_____
3	_____	_____	_____	_____

Types: 1. building, 2. trees/bush, 3. ridges, 4. cliffs, 5. structure other than building.
Distance and height in meters. Direction in 8-point compass.

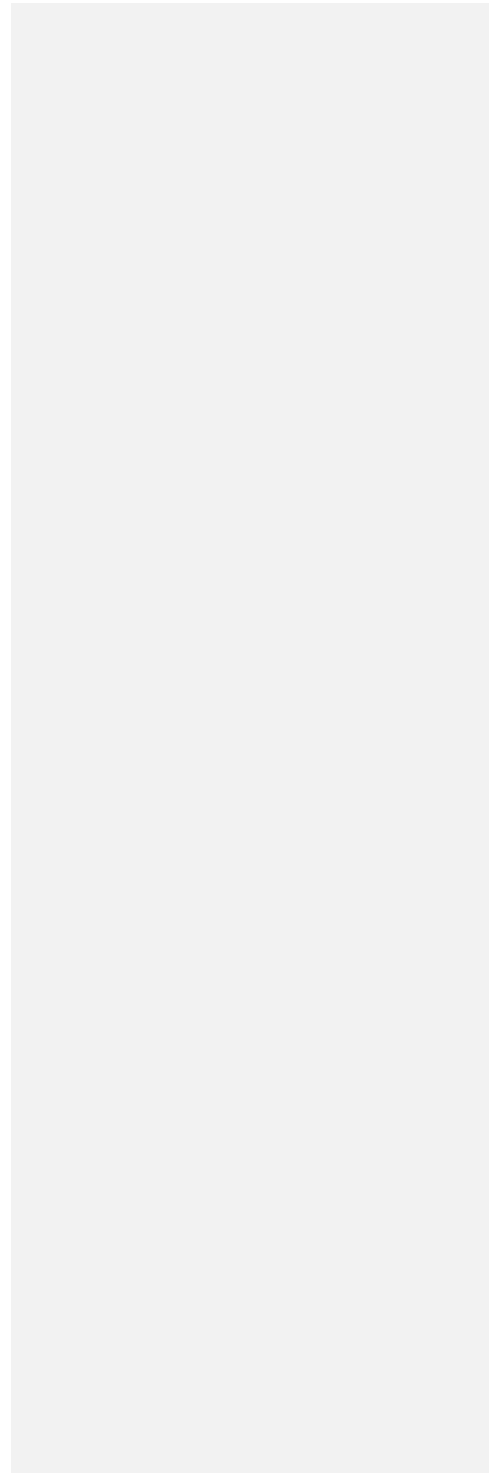
Comments:

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 486 of 672

Appendix C

Sampling Schedule



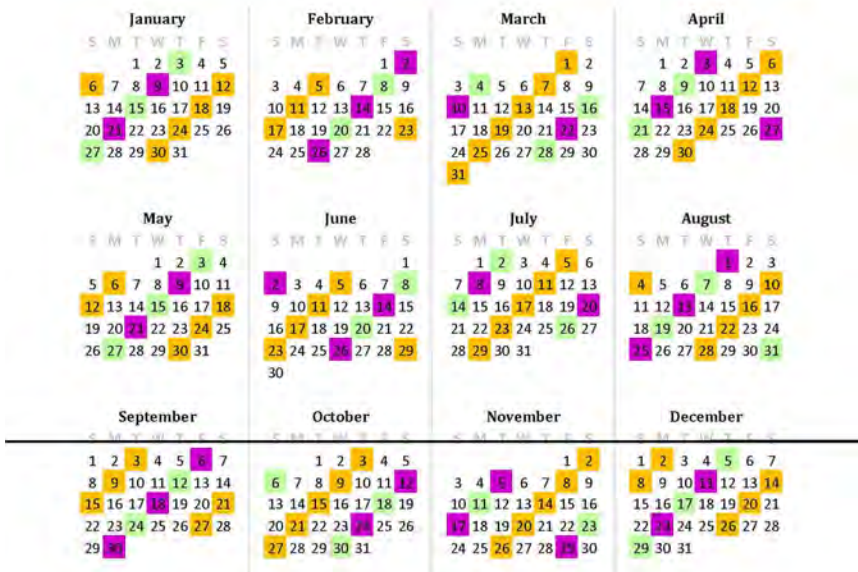
Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 487 of 672

EPA Sampling Schedule 2019

Important Dates

Notes
3-Day schedule is shown in orange, green, and purple
6-Day schedule is shown in green and purple
12-Day schedule is shown in purple

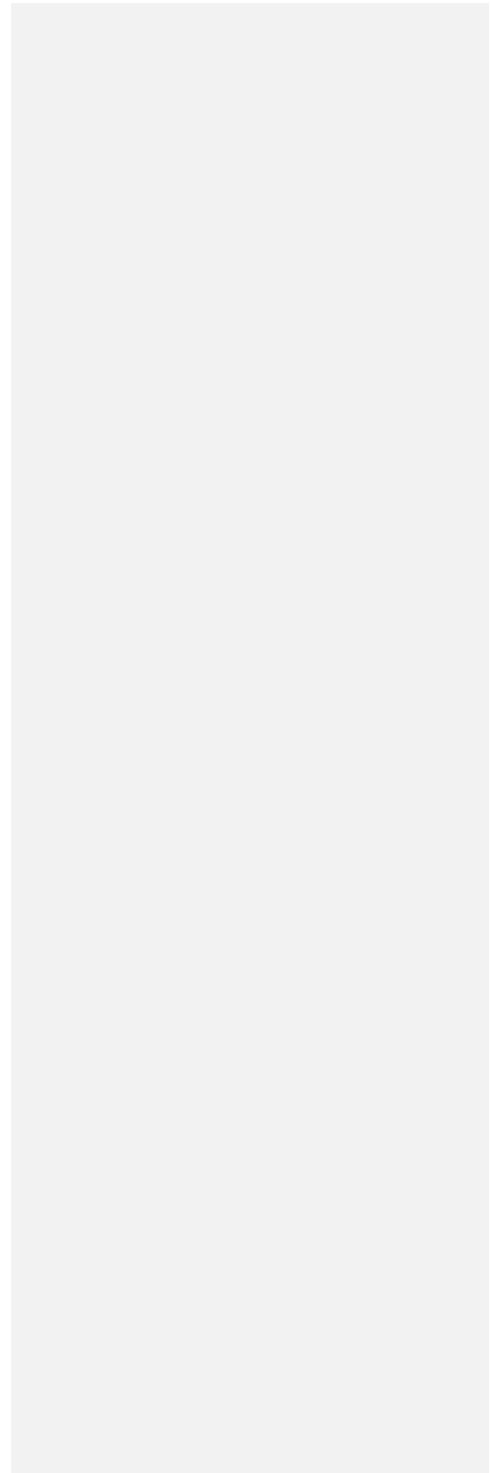


Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 488 of 672

Appendix D

Canister Sampling Standard Operating Procedure



Canister Sampling Standard Operating Procedure

The following sampling procedures and worksheet are developed from U.S. EPA's Compendium Method TO-15.

PROCEDURE

Subatmospheric Pressure Sampling

1. Prior to sample collection, the appropriate information is completed on the canister sampling field test data sheet (FTDS). A sample FTDS from the TO-15 method is attached along with a FTDS prepared by Pace Analytical Lab for this project. If acceptable, the Pace Analytical FTDS will be utilized for this project.
2. In preparation for sample collection, the canister is evacuated to < 0.2 millimeters of mercury (mmHg) (< 200 mTorr). When the canister is opened to the atmosphere containing the VOCs to be sampled, the differential pressure causes the sample to flow into the canister. This technique will be used to collect time-weighted-average (TWA) samples (duration of 24 hours) taken through a flow-restrictive inlet (mass flow controller). The pressure differential causes the sample to flow into the canister.
3. With a mass flow controller, the subatmospheric sampling system can maintain a constant flow rate from full vacuum to within about 7 kPa (1.0 psi) or less below ambient pressure.
4. Prior to field use, each sampling system must pass a humid nitrogen. All plumbing should be checked carefully for leaks. The canisters must also pass a humid nitrogen certification before use.
5. The sample canister should be cleaned and tested according to the Pace Analytical Lab SOP included in Appendix E. Each individual canister flow controller is calibrated (3.8 ml/min for 24 hr controllers) and logged following these procedures.
6. The canister is placed at the desired location and the sample valve is opened to indicate the sampling. Initial Pressure/vacuum in the canister is recorded on the canister FTDS as indicated by the sampler vacuum/pressure gauge.
7. At the end of the sampling period, the sample valve is closed, and the final vacuum/pressure is recorded on the FTDS. Pressure should be close to desired pressure.
[Note: For a subatmospheric sampling system, if the canister is at atmospheric pressure when the field final pressure check is performed, the sampling period may be suspect. This information should be noted on the sampling field data sheet.]
Time of day is also recorded.
8. Upon sample completion at the location, the appropriate information is recorded on the FTDS.
9. An identification tag is attached to the canister. Canister serial number, sample number, location, and date, as a minimum, are recorded on the tag. The canisters will be routed directly back to the analytical laboratory.

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 490 of 672

**COMPENDIUM METHOD TO-15
 CANISTER SAMPLING FIELD TEST DATA SHEET**

A. GENERAL INFORMATION

SITE LOCATION: _____ SHIPPING DATE: _____
 SITE ADDRESS: _____ CANISTER SERIAL NO.: _____
 SAMPLER ID: _____
 SAMPLING DATE: _____ OPERATOR: _____
 CANISTER LEAK _____
 CHECK DATE: _____

B. SAMPLING INFORMATION

	TEMPERATURE				PRESSURE	
	INTERIOR	AMBIENT	MAXIMUM	MINIMUM	CANISTER PRESSURE	
START						
STOP						

	SAMPLING TIMES		FLOW RATES		
	LOCAL TIME	ELAPSED TIME METER READING	MANIFOLD FLOW RATE	CANISTER FLOW RATE	FLOW CONTROLLER READOUT
START					
STOP					

SAMPLING SYSTEM CERTIFICATION DATE: _____
 QUARTERLY RECERTIFICATION DATE: _____

C. LABORATORY INFORMATION

DATA RECEIVED: _____
 RECEIVED BY: _____
 INITIAL PRESSURE: _____
 FINAL PRESSURE: _____
 DILUTION FACTOR: _____
 ANALYSIS _____
 GC-FID-ECD DATE: _____
 GC-MSD-SCAN DATE: _____
 GC-MSD-SIM DATE: _____
 RESULTS*: _____

 GC-FID-ECD: _____
 GC-MSD-SCAN: _____
 GC-MSD-SIM: _____

 SIGNATURE/TITLE

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 491 of 672



VOC Canister Sampling (TO-15) Field Data Sheet

Project _____ Canister No. _____
Test Location _____ Certification Lot No. _____
Date _____ Test _____ Run _____ Method of Flow Control _____
Operator(s) _____ Controller No. * _____

	Canister Vacuum		Barometric Pressure mm Hg or Inches Hg	Ambient Temp. (°F)
	Date and Time (24HR.)	mm Hg or Inches Hg		
Pre Test		(Gauge)		
Post Test		(Gauge)		

Site Conditions: _____

General Comments: _____

* (24 Hr. controller calibrated to 3.8 cc/min.)

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 492 of 672

Appendix E

Pace Analytical Standard Operating Procedures and Method Limits

Cleaning, Certification, Leak Checking and Preparation for
Shipment of SUMMA Passivated Canisters (ENV-SOP-MIN4-0002)

Analysis of Whole Air Sample for Volatile Organic Compound by
GC/MS EPA TO15/TO14 (ENV-SOP-MIN4-0005)

The Appendix E SOPs will be provided electronically



Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 493 of 672



Pace Analytical Services, LLC
 Method Detection Limits and Reporting Limits
 by EPA TO15

Analyte	CAS #	MDL (ppbv)	PRL (ppbv)	MW	MDL (ug/m ³)	PRL (ug/m ³)	LCS		DUP
							Lower	Upper	RPD
1,1,1-Trichloroethane	71-55-6	0.0558	0.2	133.4047	0.309	1.11	70	135	25
1,1,2,2-Tetrachloroethane	79-34-5	0.0419	0.1	167.8498	0.292	0.698	70	146	25
1,1,2-Trichloroethane	79-00-5	0.0452	0.1	133.4047	0.250	0.555	70	135	25
1,1,2-Trichlorotrifluoroethane	76-13-1	0.0724	0.2	187.3762	0.564	1.56	63	139	25
1,1-Dichloroethane	75-34-3	0.0546	0.2	98.9596	0.225	0.823	70	134	25
1,1-Dichloroethene	75-35-4	0.0679	0.2	96.9438	0.274	0.806	70	137	25
1,2,4-Trichlorobenzene	120-82-1	0.493	1	181.4487	3.72	7.54	60	133	25
1,2,4-Trimethylbenzene	95-63-6	0.0904	0.2	120.1938	0.452	0.999	70	137	25
1,2-Dibromoethane	106-93-4	0.0468	0.1	187.8616	0.366	0.781	70	140	25
1,2-Dichlorobenzene	95-50-1	0.0814	0.2	147.0036	0.498	1.22	70	137	25
1,2-Dichloroethane	107-06-2	0.0365	0.1	98.9596	0.150	0.411	70	136	25
1,2-Dichloropropane	78-87-5	0.0490	0.2	112.9864	0.230	0.939	70	136	25
1,3,5-Trimethylbenzene	108-67-8	0.0798	0.2	120.1938	0.399	0.999	70	133	25
1,3-Butadiene	106-99-0	0.0567	0.2	54.0914	0.128	0.450	64	141	25
1,3-Dichlorobenzene	541-73-1	0.0951	0.2	147.0036	0.581	1.22	70	137	25
1,4-Dichlorobenzene	106-46-7	0.164	0.5	147.0036	1.00	3.06	70	134	25
2-Butanone (MEK)	78-93-3	0.123	1	72.1057	0.369	3.00	65	143	25
2-Hexanone	591-78-6	0.179	1	100.1589	0.745	4.16	60	148	25
2-Propanol	67-63-0	0.279	1	60.1	0.697	2.50	65	135	25
4-Ethyltoluene	622-96-8	0.114	0.5	120.1938	0.570	2.50	70	132	25
4-Methyl-2-pentanone (MIBK)	108-10-1	0.124	1	100.1602	0.518	4.16	70	135	25
Acetone	67-64-1	0.499	1	58.0798	1.21	2.41	59	132	25
Benzene	71-43-2	0.0471	0.1	78.1134	0.153	0.325	70	134	25
Benzyl Chloride	100-44-7	0.228	0.5	126.58	1.20	2.63	56	150	25
Bromodichloromethane	75-27-4	0.0537	0.2	163.8289	0.366	1.36	70	142	25
Bromoform	75-25-2	0.135	0.5	252.7309	1.42	5.25	69	150	25
Bromomethane	74-83-9	0.0575	0.2	94.9387	0.227	0.789	61	141	25
Carbon Disulfide	75-15-0	0.0692	0.2	76.131	0.219	0.633	66	134	25
Carbon tetrachloride	56-23-5	0.0671	0.2	153.823	0.429	1.28	60	145	25
Chlorobenzene	108-90-7	0.0588	0.2	112.5585	0.275	0.936	70	130	25
Chloroethane	75-00-3	0.0969	0.2	64.5145	0.260	0.536	65	143	25

KL 8/2/18

Pace Analytical Services, LLC
 1700 Elm Street SE, Suite 200 Minneapolis, MN 55414

612-607-1700
 www.pacelabs.com



Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 494 of 672



Pace Analytical Services, LLC
 Method Detection Limits and Reporting Limits
 by EPA TO15

Analyte	CAS #	PRL (ppbv)	MW	MDL (ug/m ³)	PRL (ug/m ³)	LCS		DUP	
						Lower	Upper	RPD	
Chloroform	67-66-3	0.0395	0.1	119.3779	0.196	0.496	70	132	25
Chloromethane	74-87-3	0.0742	0.2	50.4877	0.156	0.420	58	140	25
cis-1,2-Dichloroethene	156-59-2	0.0543	0.2	96.9438	0.219	0.806	70	136	25
cis-1,3-Dichloropropene	10061-01-5	0.0659	0.2	110.9706	0.304	0.923	70	136	25
Cyclohexane	110-82-7	0.101	0.5	84.1608	0.353	1.75	70	133	25
Dibromochloromethane	124-48-1	0.0830	0.2	208.2799	0.719	1.73	68	149	25
Dichlorodifluoromethane	75-71-8	0.0584	0.2	120.9138	0.293	1.01	69	130	25
Dichlorotetrafluoroethane	76-14-2	0.0615	0.2	170.9216	0.437	1.42	68	130	25
Ethanol	64-17-5	0.424	1	46.07	0.812	1.92	65	146	25
Ethyl Acetate	141-78-6	0.0518	0.2	88.106	0.190	0.733	68	136	25
Ethyl Benzene	100-41-4	0.0690	0.2	106.167	0.305	0.883	70	133	25
Hexachlorobutadiene	87-68-3	0.181	0.5	260.762	1.967	5.42	59	140	25
m&p-Xylene	106-42-3	0.158	0.4	106.167	0.699	1.77	70	133	25
Methyl Tert Butyl Ether	1634-04-4	0.181	1	88.1492	0.663	3.66	70	132	25
Methylene chloride	75-0902	0.267	1	84.9328	0.944	3.53	67	132	25
Naphthalene	91-20-3	0.248	0.5	128.1732	1.32	2.66	55	136	25
n-Heptane	142-82-5	0.0913	0.2	100.2034	0.380	0.833	64	136	25
n-Hexane	110-54-3	0.0867	0.2	86.1766	0.311	0.716	70	130	25
o-Xylene	95-47-6	0.0780	0.2	106.167	0.344	0.883	70	132	25
Propylene	115-07-1	0.0816	0.2	42.0804	0.143	0.350	37	150	25
Styrene	100-42-5	0.0794	0.2	104.1512	0.344	0.866	70	139	25
Tetrachloroethene	127-18-4	0.0455	0.1	165.834	0.314	0.689	70	133	25
Tetrahydrofuran	109-99-9	0.0870	0.2	72.1066	0.261	0.600	62	141	25
Toluene	108-88-3	0.0916	0.2	92.1402	0.351	0.766	70	130	25
trans-1,2-dichloroethene	156-60-5	0.0706	0.2	96.9438	0.285	0.806	70	132	25
trans-1,3-Dichloropropene	10061-02-6	0.0953	0.2	110.9706	0.440	0.923	70	135	25
Trichloroethene	79-01-6	0.0470	0.1	131.3889	0.257	0.546	70	135	25
Trichlorofluoromethane	75-69-4	0.0641	0.2	137.3684	0.366	1.14	59	140	25
Vinyl Acetate	108-05-4	0.0754	0.2	86.0902	0.270	0.716	57	150	25
Vinyl chloride	75-01-4	0.0485	0.1	62.4987	0.126	0.260	70	141	25

KL 8/2/18

Pace Analytical Services, LLC
 1700 Elm Street SE, Suite 200 Minneapolis, MN 55414

612-607-1700
 www.pacelabs.com



Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 495 of 672



Pace Analytical Services, LLC
 Method Detection Limits and Reporting Limits
 by EPA TO15

EXTRA ANALYTES (available upon request at an additional cost)

Analyte	CAS #	PRL (ppbv)	MW	MDL (ug/m ³)	PRL (ug/m ³)	LCS		RPD		
						Lower	Upper			
1,2,3-Trimethylbenzene	526-73-8	0.0807	0.2	120.19	0.403	0.999	69	150	25	
1,4-Dioxane	123-91-1	0.205	1	88.1051	0.751	3.66	70	145	25	
2,2,4-Trimethylpentane	540-84-1	0.145	0.5	114.22	0.689	2.37	70	140	25	
Acrolein	107-02-8	0.237	0.5	56.06	0.553	1.17	65	150	25	
Acrylonitrile	107-13-1	0.145	0.5	53.06	0.320	1.10	64	142	25	
Allyl Chloride	107-05-1	0.234	0.5	76.525	0.744	1.59	60	147	25	
Chlorodifluoromethane	75-45-6	0.184	0.5	86.47	0.662	1.80	68	142	25	
Di-isopropyl Ether	108-20-3	0.0795	1	102.1748	0.338	4.25	70	136	25	
Ethyl Tert-Butyl Ether	637-92-3	0.175	1	102.1748	0.741	4.25	70	136	25	
Isopentane	78-78-4	0.0997	0.5	72.15	0.299	1.50	44	150	25	
Isopropylbenzene	98-82-8	0.0762	0.5	120.194	0.381	2.50	70	133	25	
Methyl Methacrylate	80-62-6	0.0951	0.2	100.12	0.396	0.832	47	150	25	
Methylcyclohexane	108-87-2	0.0950	0.5	98.186	0.388	2.04	70	137	25	
N-Butylbenzene	104-51-8	0.201	0.5	134.2206	1.12	2.79	70	148	25	
N-Propylbenzene	103-65-1	0.0805	0.5	120.1938	0.402	2.50	70	145	25	
p-Isopropyltoluene	99-87-6	0.0922	0.2	134.22	0.515	1.12	70	143	25	
Sec-Butylbenzene	135-98-8	0.155	0.5	134.2206	0.866	2.79	70	142	25	
Tert Amyl Methyl Ether	994-05-8	0.243	1	102.1748	1.03	4.25	70	135	25	
Tert Butyl Alcohol (TBA)	75-65-0	0.326	1	74.12	1.00	3.08	63	143	25	
Tert Butyl Benzene	98-06-6	0.0959	0.2	134.22	0.535	1.12	70	142	25	
Vinyl Bromide	593-60-2	0.0810	0.2	106.95	0.360	0.889	70	140	25	
THC as Gas (C4-C12)		11.35	23.9		51.9		104	59	150	25
Xylene (Total)	1330-20-7	0.1583	0.6	106.17	0.699	2.65	70	138	25	
Surrogates										
1,4-Dichlorobenzene-d4 (S)	3855-82-1						30	150		
Hexane-d14 (S)	21666-38-6						30	150		
Toluene-d8 (S)	2037-26-5						30	150		

Highlighted cells are calculated results.

KL 8/2/18

Pace Analytical Services, LLC
 1700 Elm Street SE, Suite 200 Minneapolis, MN 55414

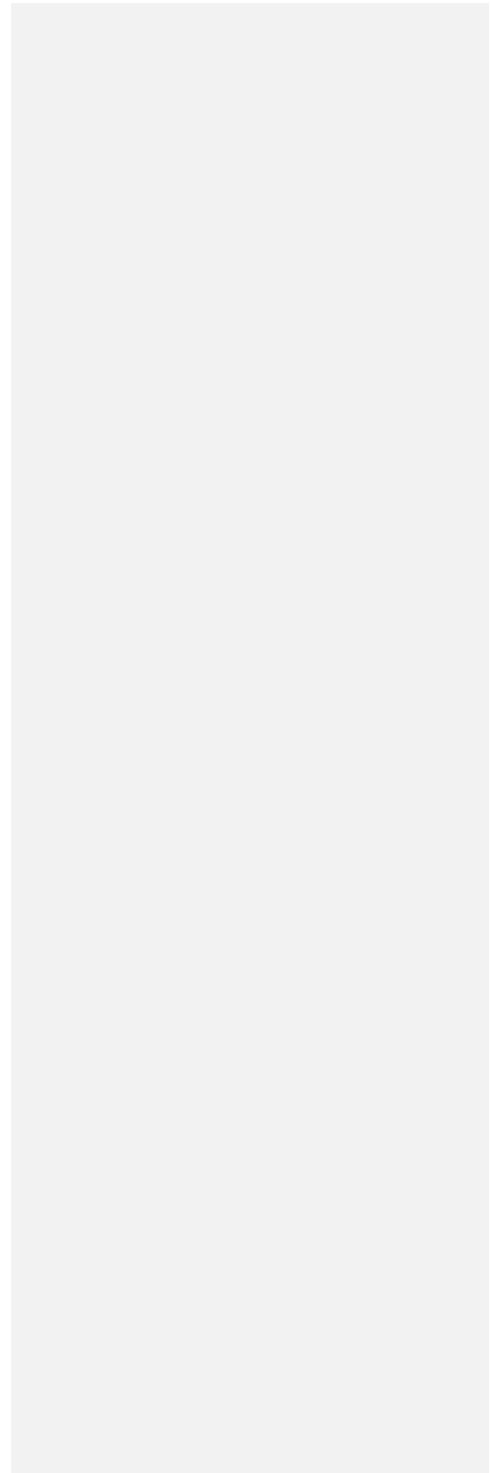
612-607-1700
 www.pacelabs.com

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 496 of 672

Appendix F

Quality Assurance Project Plan



Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 497 of 672

WENCK File #2606-0009
February 2019

Quality Assurance Project Plan

Water Gremlin Company

Prepared for:
Water Gremlin Company

Site Address:
4400 Otter Lake Road
White Bear Township, MN
55110



Prepared by:

WENCK
1802 Wooddale Drive
Woodbury, MN 55125
Phone: 651-294-4580
Fax: 651-228-1969

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 498 of 672

Table of Contents

1.0 PROJECT DESCRIPTION	1-1
2.0 ORGANIZATIONAL CHART OF RESPONSIBILITY	2-1
3.0 DATA QUALITY OBJECTIVES	3-1
4.0 SITE SELECTION/SAMPLE PROCEDURES.....	4-1
5.0 SAMPLE CUSTODY.....	5-1
5.1 Temperature Preservation Requirements	5-1
5.2 Permissible Holding Times	5-1
6.0 CALIBRATIONS AND FREQUENCY	6-1
7.0 ANALYTICAL PROCEDURES	7-1
8.0 DATA REDUCTION, VALIDATION, REPORTING	8-1
9.0 INTERNAL QUALITY CONTROL (QC).....	9-1
10.0 PERFORMANCE SYSTEM AUDITS	10-1
11.0 CORRECTIVE ACTIONS.....	11-1
12.0 REPORTING	12-1
13.0 REFERENCES.....	13-1

February 2019

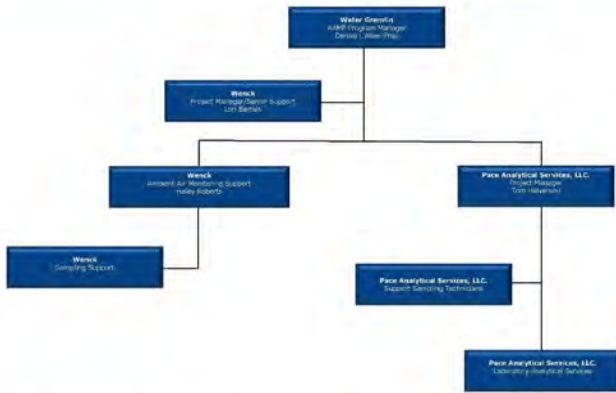
\\wcnk\cal\reference\poc\library\16\1616161616 - WENCK - 2019 (1616161616)
Monitoring\Reports\02_21_2019\UCC\UFP-F-W-VOC-QAMP.docx



Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 500 of 672

2.0 Organizational Chart of Responsibility



NOTE: Specific names subject to change.

February 2019

2-1

Wenck has performed engineering services for the City of Denver - Water Growth 2009 - 2018. Engineering performed by Wenck Analytical Services, LLC, an ISO 9001:2015 certified company.



Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 502 of 672

4.0 Site Selection/Sample Procedures

A summary of the strategy used in determining the number and locations of the sampling stations is included in Section 3 of the AAMP. The site locations are shown on the Figure 1 site layout.

Detailed sampling procedures have been developed for the ambient air sampling being utilized in this project. These detailed SOPs include specific information on the EPA-approved method being used and specific quality assurance, procedures, calibration, sample custody, and quality control.

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 504 of 672

6.0 Calibrations and Frequency

Calibration procedures for the flow controllers are outlined in the Lab SOP included in Appendix E of the AAMP. All calibration activities will be documented.

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 505 of 672

7.0 Analytical Procedures

Pace Analytical Services, LLC. (Pace) will be performing the analytical laboratory services for EPA Compendium Methods TO-15. Pace has an extensive National Environmental Laboratory Accreditation Program (NELAP) Quality Assurance program to guarantee the highest quality data. TDCE for Method TO-15 will be analyzed by Gas Chromatography/Mass Spectrometry (GC/MS).

Contact information for Pace is below:

Pace Analytical Services, LLC.
1700 Elm Street SE
Minneapolis, MN 55414
Contact: Thomas Halverson
612-607-6398
tom.halverson@pacelabs.com

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 506 of 672

8.0 Data Reduction, Validation, Reporting

Data reduction and reporting are discussed in Section 5 of AAMP.

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 508 of 672

10.0 Performance System Audits

Performance and system audits will not be conducted under this plan at this time based on the short duration of the program.

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 510 of 672

12.0 Reporting

Specific recordkeeping requirements are discussed in Section 5 of the AAMP.

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 511 of 672

13.0 References

- United States Environmental Protection Agency (US EPA), May 1993. *Air/Superfund National Technical Guidance Series, Volume IV – Guidance for Ambient Air Monitoring at Superfund Sites (Revised)*. EPA-451/R-93-007. Office of Air Quality Planning and Standards Research, Research Triangle Park, NC.
- U.S. Environmental Protection Agency (US EPA), August 1998. *Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Part 1. Ambient Air Quality Monitoring Program Quality System Development*.
- U.S. Environmental Protection Agency (US EPA), March 2001. *EPA Requirements for QA Project Plans (QA/R-5)*. EPA/240/B-01/003. Office of Environmental Information Washington, DC.
- U.S. Environmental Protection Agency (US EPA), January 1999. *Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air: Method TO-15, Second Edition*. EPA/625/R-96/010b. Research Triangle Park, NC.
- Pace Analytical Services, LLC. December 2018. *Cleaning, Certification, Leak Checking and Preparation for Shipment of SUMMA Passivated Canisters (ENV-SOP-MIN4-0002)*
- Pace Analytical Services, LLC. October 2018. *Analysis of Whole Air Sample for Volatile Organic Compound by GC/MS EPA TO15/TO14 (ENV-SOP-MIN4-0005)*

Appendix G. General public preclusion plan

Introduction

In evaluating compliance with the National Ambient Air Quality Standards (NAAQS), ambient air is considered to be areas in which the general public has access. On December 2, 2019, EPA issued a memo stating that areas controlled by the facility where measures effectively preclude general public access are not considered ambient air. This General Public Preclusion Plan documents the measures to be taken by Water Gremlin Company (Water Gremlin) at their White Bear Lake facility to preclude the general public from entering the property.

Facility Setting

Water Gremlin is located in a suburban area of the Twin Cities, within the boundaries of White Bear Township. The facility encompasses approximately 60 acres of land. Water Gremlin conducts its operations in two complexes on the property, one set of adjoining structures comprising the North Building, and a single South Building. The ambient air boundary for the air dispersion modeling analysis at the Water Gremlin facility was placed along the property line on the northern border surrounding the North Building. Figure 1 shows the entire existing property boundary (yellow) and the general extent of the proposed ambient area boundary (red). There is no fence surrounding the entire property boundary; however, physical geographical barriers (e.g., creek, marsh, wet ground) prevent general public access to the site. Receptors were placed surrounding the South Building and outside the ambient air boundary. The South Building is intended to remain unfenced.

Figure 1. Existing Property Boundary and Proposed Ambient Air Boundary



Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 513 of 672

Proposed Preclusion Measures

The North Building is located near the northwestern property corner, with entrances to the facility located to the west and north sides of the building. A fence also exists surrounding the northern boundary of the North Building parking lot. Part of the facility is surrounded by a marsh, creek, and heavily wooded area. These areas act as physical barriers precluding the public from accessing the facility. However, Water Gremlin is utilizing fencing or other equivalent physical barriers in addition to those existing physical barriers to further preclude the public from gaining access. Remote monitoring devices (cameras, drones, etc.) will be used to monitor the entrances, parking lots, and wetland areas. Figure 2 describes the proposed preclusion measures for the facility.

Figure 2. Proposed Fencing and Relevant Ambient Air Boundary



Water Gremlin will be adding No Trespassing signs every 500 feet around the property line and will install or operate remote monitoring devices (cameras, drones, etc.) for both entrances at the North Building. The combination of the physical geographical features, existing fencing, added signage discouraging trespassing, and monitoring devices will effectively restrict the general public from accessing the facility property boundary and thus protect public health.

General Public Preclusion Plan

The General Public Preclusion Plan includes multiple deterrents to preclude the general public from accessing the facility. These include:

- 1) Fencing: Water Gremlin will install fencing or other equivalent physical barriers surrounding the North Building as shown in Figure 2.

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 514 of 672

2) Topography: There are areas on the site with natural topography that make it difficult for the general public to reach the north building. There is a heavily wooded area to the northeast and a marsh, creek, and wetland areas to the east. A small creek runs through the Water Gremlin property between the two building complexes. These natural barriers will be supplemented with fencing where feasible.

3) No Trespassing Signs: Water Gremlin will install No Trespassing signs that include the company name and contact information every 500 feet along the property boundary. A sign will also be posted at both entrances (Otter Lake Road and Whitaker Street) indicating the property boundary and restricted entry to employees and authorized visitors.

4) Remote Monitoring Devices: Water Gremlin will install or operate (and maintain) remote monitoring equipment to maintain the effective boundary as shown in Figure 2. Cameras are being considered currently but Water Gremlin could elect to use other forms of remote monitoring (e.g. drones, etc.) as new technology is developed. Multiple cameras monitor the area during operations. Malfunctions will be observed and addressed daily during the monitoring. Remote monitor operation and maintenance will follow the manufacturer's recommendations. When remote monitoring devices are offline, security patrols will be increased until remote monitoring devices are operable.

5) Public Preclusion Breaches: The protocol for addressing a public breach on site will be added to the annual environmental training for all relevant Water Gremlin personnel. In the event of a breach, personnel will respond to the scene and escort the trespasser off-site or contact local law enforcement. Upon successful mitigation of any breach incident, Water Gremlin personnel will document the incident. Any actions to prevent future breaches such as repairing of fence, addition of signage or other appropriate Best Management Practices (BMPs) will be taken, if necessary. The breach report and any supplementary documentation will be included in the electronic records files maintained for the facility.

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 515 of 672

Appendix H. Minimum requirements for a revised VOC and TO-15 ambient air monitoring plan

Network design for criteria and non-criteria pollutants

All air monitoring networks intending to demonstrate attainment with State and Federal ambient air quality standards must comply with the requirements in the Code of Federal Regulations Title 40, Part 58 (40 CFR Part 58).

Location, number of monitors, parameters, and duration of the monitoring shall be determined through development of an air monitoring process (see *Development of an air quality monitor siting plan for determination of compliance, aq1-65* found on the MPCA website at <https://www.pca.state.mn.us/sites/default/files/aq1-65.pdf>).

Number and locations of monitoring sites

1. Maintain the 2 monitors located at the West and North sites.
2. Meet EPA siting requirements
 - a. Permanent site
 - b. Mass flow controller
 - c. Install platforms
 - d. Improve monitoring site security

Monitoring results consistently show the West and North monitoring sites measuring the highest t-DCE and TCE concentrations on average (Figures 1 and 2). These two sites provide a “worst-case scenario” of ambient air t-DCE and TCE concentrations surrounding the facility. EAO recommends maintaining the West and North sites and discontinuing the other VOC monitoring sites since we would expect the t-DCE and TCE concentrations at the other sites to be no higher on average than t-DCE and TCE concentrations measured at the West and North sites. EAO recommends the facility make improvements to those monitoring sites including installing platforms for the VOC samplers and improving monitoring site security to meet EPA siting requirements pursuant to 40 CFR Part 58. EAO recommends that the facility also measure wind directions and velocities on their property to better identify potential offsite sources of VOCs measured at the air monitoring sites, but this is not required to be included as part of the monitoring plan.

Figure 1: Average t-DCE concentrations at Water Gremlin monitoring sites 3/1/2019 to 8/1/2020

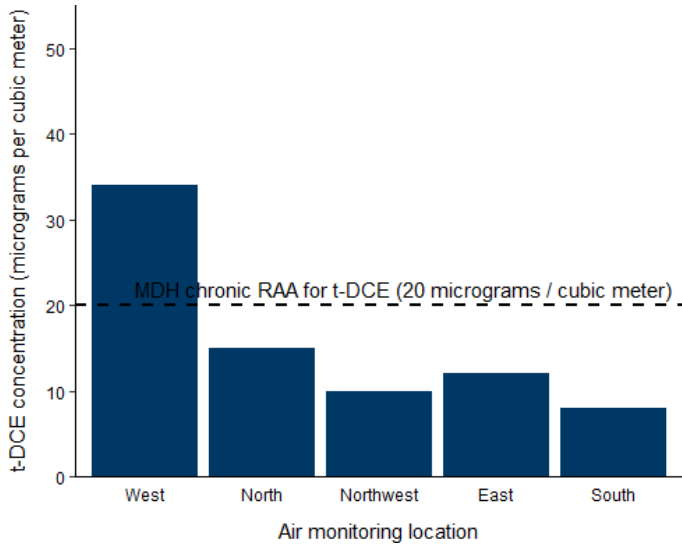
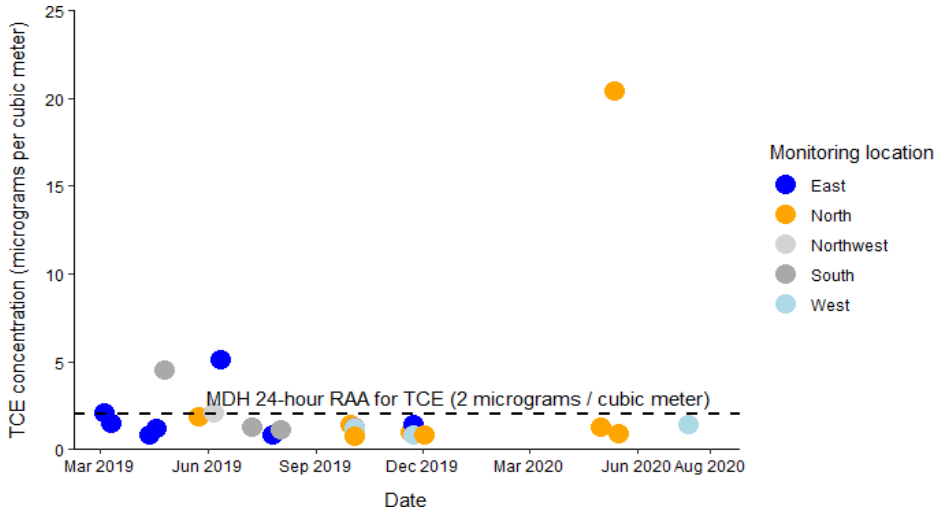


Figure 2: Detected TCE sample results at Water Gremlin air monitoring sites 3/1/2019 to 8/1/2020



Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 517 of 672

Sampling frequency

1. During the first 365 days beginning on permit issuance date, once every three days as described in Appendix F.

The permit does not require a compliance demonstration with 365-day rolling sums of 1,2-(trans-) Dichloroethylene emissions during the first year of the permit because it is considered a transition year. This is because the reported 1,2-(trans-) Dichloroethylene emissions prior to the issuance of the permit are above the 32.6 tons per year limit based on a 365-day rolling sum and are expected to continue to be above the limit for some time during the first year under the permit, even if the permittee complies with the 1,2-(trans-) Dichloroethylene emission cap established for the first 365 days under the permit. Because exceedances of the chronic 1,2-(trans-) Dichloroethylene RAA of 20 micrograms per cubic meter have been detected at operating rates above 32.6 tons per year based on a 365-day rolling sum, MPCA considered it prudent to continue with the same sampling frequency to make sure the same variation in processing rates is assessed for ambient impacts. The requirement to comply with the 32.6 tons per year based on a 365-day rolling sum begins on the second year of the permit.

2. Once every six days on the 366th day following permit issuance

Average ambient air concentrations measured around the facility once every six days are about the same as average concentrations measured once every three days if the facility's 1,2-(trans-) Dichloroethylene throughput and emissions do not vary greatly on a day-to-day basis and an emission limit demonstrated to be protective is enforced by the permit. Therefore, MPCA would consider reducing the sampling frequency from once every three days to once every six days. Reducing the sampling frequency to once every six days would make the facility's sampling schedule consistent with MPCA's VOC air sampling schedule without compromising the representativeness of the measurements.

Data submittal frequency

2. Submit all monthly TO-15 results to MPCA within 30 days after the last day of the month.

Since t-DCE is a pollutant with potential risks primarily associated with long-term exposure, it is generally not necessary to receive monitoring results within days. It is more important to focus on long-term average concentrations and trends instead of day-to-day monitoring results, so monthly results submissions would suffice for evaluating potential health risks associated with t-DCE exposure and notifying the community of any potential health risks in an appropriate amount of time. Therefore, EAO recommends that the facility submit all TO-15 results to MPCA on a monthly basis, with results for a calendar month being submitted to MPCA within 30 days after the last day of the month. This would reduce the frequency which new information is reported to the public, but all monitoring results will still be made publicly available as needed.

Monitoring plan

3. MPCA Environmental Data Quality Unit may annually review and request amendments

EAO recommends that the facility include all of the information above including monitoring locations, sampling frequency and duration, data submittal process, and a quality assurance project plan (QAPP) in their air monitoring plan. The monitoring plan is not valid until approved by the MPCA Environmental Data Quality Unit. Once the monitoring plan is approved, the facility is expected to operate an air monitoring network and submit results to MPCA in accordance with the monitoring plan. The monitoring plan may be reviewed annually by the MPCA Environmental Data Quality Unit and MPCA may request amendments to the air monitoring plan after review.

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 518 of 672

MPCA VOC sites

4. MPCA VOC monitoring sites may be removed.

MPCA independently operates the Birch Lake and Columbia Park VOC monitoring sites in response to community concerns about VOC exposure for vulnerable populations. These sites are not part of any permit condition or stipulation agreement and are only for informational purposes. These sites have consistently monitored very low levels of t-DCE and TCE well below levels of health concern and EAO recommends they be discontinued to free up air monitoring resources for other locations of greater concern.

Lead

5. MPCA lead monitoring sites may be removed

The facility may demonstrate compliance with the lead NAAQS through either air dispersion modeling or ambient air monitoring described in the MPCA's [industrial monitoring process](#). MPCA is independently operating two lead monitoring sites near the facility in response to community concerns about exposure to lead. These sites are not intended to demonstrate the facility's compliance with the lead NAAQS. Concentrations measured at both sites have been well below the lead NAAQS; however, for the facility to demonstrate future compliance with the lead NAAQS, the facility should demonstrate compliance through air dispersion modeling or by operating its own lead air monitoring network according to an MPCA approved air monitoring plan. If the facility demonstrates compliance with the lead NAAQS via air modeling, then the facility does not need to conduct lead air monitoring. If the facility does not demonstrate compliance with the lead NAAQS via air modeling, then EAO recommends the facility operate its own lead monitoring network in accordance with an MPCA approved air monitoring plan (the lead air monitoring plan would be part of the same document as the VOC air monitoring plan). Once the facility demonstrates compliance with the lead NAAQS through either modeling or monitoring, the MPCA lead monitoring sites will be redundant and EAO recommend they be discontinued.

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 519 of 672

General Guidance on Ambient Air Monitoring for Permittees (aq2-34, 12/1/20)



Ambient air monitoring for Permittees

Doc Type: Ambient Monitoring - QA/QC

Instructions: This exhibit shall apply to all emission facilities that are required to perform ambient air monitoring in order to demonstrate compliance of State and Federal ambient air quality standards or permit conditions, unless otherwise stated by special conditions of the permit.

Probe and siting criteria

Probe siting and placement for criteria pollutants should comply with specifications described in Appendix E to 40 CFR Part 58. Each monitoring site must have a site and monitor information form completed prior to submission of data (see attached Appendix A).

Probe siting for non-criteria pollutants must meet requirements prescribed in the approved method for the target parameter.

Monitoring methods

All criteria pollutants must be measured by U.S. Environmental Protection Agency (EPA) reference or equivalent methods, approved in accordance to Appendix C to 40 CFR Part 58.

A list of "Designated Reference and Equivalent Methods" and "Acceptable Methods for Non criteria Pollutants" may be obtained on the EPA's Ambient Air Monitoring Technology Information Center (AMTIC) website located at <https://www.epa.gov/amtic>.

The Minnesota Pollution Control Agency (MPCA) must be informed of any method change performed during the monitoring project. The method change must be reported within 45 working days from the end the reporting quarter in which the change took place.

Non criteria pollutants must be measured by methods approved by the EPA. If no method exists, MPCA will suggest candidate methods recommended by the EPA or the State.

Monitoring plan/quality assurance project plan

Permittee or operator must submit a monitoring plan that incorporates a quality assurance plan to the MPCA's Environmental Analysis and Outcomes (EAO) Division at least 30 days prior to the start date of the air monitoring project. The Agency shall review the monitoring quality assurance plan to ensure compliance with EPA requirements of monitoring networks and determine whether adequate quality control measures are utilized to ensure acceptable levels of quality data.

A. Elements of monitoring plan/quality assurance project plan

The primary guidance for developing a quality assurance plan is specified in EPA *Requirements for QA Project Plans (QA/R-5)* and Appendix A to 40 CFR Part 58. Questions regarding the

monitoring plan should be sent to the air quality assurance coordinator Katie Rinker at katie.rinker@state.mn.us.

In general, the following elements must be addressed in a monitoring plan:

1. Must include a statement as to the purpose or objective of the monitoring project, including proposed sampling duration.
2. General description of all monitors and monitoring locations.
3. Description of calibration methods and reference standards.
4. Sampling schedule for manual methods.
5. Summary of standard operating procedures.
6. Description of routine quality control checks, including frequency.
7. Control limits for zero, span, and other control checks including audits.
8. Schedule of performance audits.
9. Description reference standards traceability.
10. Plan of corrective actions when monitors fail to meet control/audit limits.
11. Description of data recording and validation methods.
12. Format of data submission.

B. Audits

In addition to the quality assurance program developed by the permittee, the MPCA will conduct performance and systems audits on all criteria pollutant monitors. A similar audit format will be designed for non-criteria pollutants dependent upon pollutant parameters. Frequency of scheduled MPCA audits will be determined by the industrial monitoring process.

2. Data submittal

All permittees required to submit data to the agency must do so no later than 45 working days past the end of each calendar quarter. All data should be submitted electronically to AQRoutineReport.PCA@state.mn.us.

Monitoring site information, monitoring data, and quality control results must be compliant with submission requirements of the MPCA "Ambient Air Quality Data Submission Standard" (Appendix A of this document).

Any questions concerning data submittal should be directed to the Ambient Air Quality Data Manager, Kellie Gavin at 651-757-2379 or kellie.gavin@state.mn.us.

C. Particulate matter (PM) PM2.5

The permittee shall include the following data assessment information as per Section 5.2 of Appendix A to 40 CFR Part 58 for each sampling quarter as applicable:

1. Precision probability limits and percentage differences from Section 4.3.1 of Appendix A to 40 CFR Part 58.
2. Flow Rate Verification results and percentage differences from Section 3.2 of Appendix A to 40 CFR Part 58.
3. All data used to calculate the reported estimates of precision and accuracy including reference standard certifications, collocated sampler, and audit results must be made available to the MPCA upon request.

D. Non criteria pollutants

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 521 of 672

Data collected for non-criteria pollutants must be accompanied by any pertinent quality control information obtained during the reporting quarter. This would include the following information, where applicable:

1. Sampling train flow rate checks.
2. Field blank data.
3. Analytical blank data.
4. Spiked sample percent recoveries.
5. Calibration check standard results.
6. Maintenance logs and internal audit results.
7. Sample duplicate results

Any documentation deemed necessary to assess reported data including, laboratory and field logbooks, mass spectra data, strip charts, and calibration data must be made available to the MPCA upon request.

3. Data validation

The requirement for data recovery is 75 percent of all data possible from each sampling quarter for automated and manual methods. Minimum recovery for the meteorological parameters of wind speed and wind direction is 80 percent from each sampling quarter.

Data that is determined to be invalid is replaced with the appropriate null code. The reasons for invalidation of data must be reported to the MPCA. There should not be any correlation between missing data periods and expected highest concentrations.

Ambient air quality data submission standard

The Environmental Analysis and Outcomes Division (EAO) of the Minnesota Pollution Control Agency collects ambient air quality data in order to assess the quality of the air in the state, and to determine compliance with both the National Ambient Air Quality Standards and Minnesota Ambient Air Quality Standards. The ambient air quality data is collected from a network of air monitoring stations maintained by the EAO and from networks required of some regulated industries. This document specifies the media, file types, data coding formats, and procedures for submitting information related to ambient air quality data to the MPCA.

8. The Minnesota air quality data handling system

The MPCA maintains a computerized data handling system that accepts, stores, and reports information relating to ambient air quality data. It is used to compile and organize air monitoring data from all air monitoring networks within the state into a useful format acceptable to the EPA. To facilitate this, all information submitted to the system must be in a standardized format.

Special input formats and a system of codes developed by the EPA for their Air Quality System (AQS) database or by the MPCA for specific needs have been adopted to ensure standardization and ease of data submission on the part of any contributing organization. In addition, a number of edit checks have been instituted to screen data being submitted to the system. The three classes of information that are accommodated in the Laboratory Information Management System: site information, ambient air quality data, and precision and accuracy information is described below.

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 522 of 672

1. Site and monitor information:

A detailed descriptive information about the location and environment of the sampling site and the parameters monitored. This includes the state, county, and city where the site is located, the geographic coordinates of the site, and its elevation above local terrain and mean sea level. It also includes a description of the site location and the dominating influence on the sampler within approximately a one-mile radius of the sampling site.

2. Ambient air quality data:

The information to completely characterize the measurement. This includes the sampling site name, the monitor identification number, the parameters measured, the method of collection and analysis, the duration of the sample, the date and time of the sample, and the result of the measurement.

3. Precision and Accuracy data:

The information to determine the precision and accuracy of collection and analysis methods that were used to obtain ambient air quality data. This includes raw data from bi-monthly precision checks and from quarterly audits.

Site information is submitted only once for each location, although it must be updated whenever the site environment changes. Air quality data are supplied continuously to the EAO by the MPCA network of monitors and periodically by the networks of some regulated industries. Precision and accuracy data are submitted each calendar quarter.

9. Section II. Sampling site and monitor information

Before any air quality data from a monitor can be submitted, site and monitor information must be supplied to the EAO ambient air quality data manager. After the data manager has received the necessary site and monitor information, an identification number will be assigned to the monitor. The identification number must be used to submit the air quality data from the monitor.

Forms *Ambient air monitoring site information form, aq10-19a* and *Ambient air monitoring monitor information form, aq10-19b* are provided for submitting site and monitor information. Whenever the site or monitor information changes, the data manager must be notified of the changes.

A. Site information

The information required to establish a new site is in form *Ambient air monitoring site information form, aq10-19b*; this information must be sent to the data manager whenever a new site is established.

The date of the last air quality sample collected by a monitor must be provided to the data manager when a monitor is removed from a site. All monitors at the site must have a termination date on or before the site termination date.

B. Monitor information

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 523 of 672

The information required to add a monitor to a site is in form *Ambient air monitoring monitor information form, aq10-19a*; this information must be sent to the data manager for each monitor added to a site.

The date of the last air quality sample collected by a monitor must be provided to the data manager when a monitor is removed from a site.

10. Section III. Data formatting

The technical specifications for acceptable submission of air quality data are as follows:

1. **Dataset file type:** Pipe delimited text file
2. **Data coding format:** AQS formatted transactions. The structure of AQS formatted transactions can be found on the EPA's AQS website at <https://aqs.epa.gov/aqsweb/documents/TransactionFormats.html>.
3. **Submission:** electronic to AQRoutineReport.PCA@state.mn.us.

11. Section IV. General

All submitted data must adhere to this standard unless the EAO Division of the MPCA approves an alternative. Failure to comply with this standard will result in the rejection of the submitted data and possible violation of any agreements requiring the submission of ambient monitoring data.

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

Appendix I. Equipment inventory at the time of permit issuance

Subject Item Id	Emission Unit Description	Max Design Capacity	Material	Units Numerator	Units Denominator	Commence Construction Date	Initial Startup Date	Date Modified
EQUI 101	CF Scrap Re-Melt Pot	1.5	Heat	million British thermal units	hours	1/1/1991	1/1/1991	
EQUI 102	Small Re-Melt Pot	0.5	Heat	million British thermal units	hours	1/1/1991	1/1/1991	
EQUI 103	Doe Run Melt Pot	0.5	Heat	million British thermal units	hours	1/1/1991	1/1/1991	
EQUI 104	CF Re-Melt Pot	0.34	Heat	million British thermal units	hours	1/1/1991	1/1/1991	
EQUI 221	Tin Melt Pot	1.25	Material	tons	hours	1/1/1998	1/1/1998	
EQUI 120	Emergency Generator Engine	0.6	Heat	million British thermal units	hours	5/1/2012	5/1/2012	
EQUI 121	Die Cast (DC09)	0.11	Material	tons	hours	1/1/1973	1/1/1973	
EQUI 122	Die Cast (DC12)	0.08	Material	tons	hours	1/1/1966	1/1/1966	
EQUI 123	Die Cast (DC33)	0.15	Material	tons	hours	1/1/1995	1/1/1995	
EQUI 124	Die Cast (DC14)	0.06	Material	tons	hours	1/1/1962	1/1/1962	
EQUI 125	Die Cast (DC15)	0.09	Material	tons	hours	1/1/1967	1/1/1967	
EQUI 126	Die Cast (DC21)	0.27	Material	tons	hours	1/1/1968	1/1/1968	
EQUI 157	Die Cast (DC51)	0.59	Material	tons	hours	1/1/2018	1/1/2018	
EQUI 127	Die Cast (DC08)	0.04	Material	tons	hours	1/1/1978	1/1/1978	
EQUI 128	Die Cast (DC10)	0.05	Material	tons	hours	1/1/1979	1/1/1979	
EQUI 129	Die Cast (DC17)	0.06	Material	tons	hours	1/1/1966	1/1/1966	
EQUI 130	Die Cast (DC18)	0.06	Material	tons	hours	1/1/1966	1/1/1966	
EQUI 131	Die Cast (DC36)	0.32	Material	tons	hours	1/1/1966	1/1/1966	
EQUI 132	Die Cast (DC37)	0.11	Material	tons	hours	1/1/1998	1/1/1998	
EQUI 133	Die Cast (DC25)	0.12	Material	tons	hours	1/1/1990	1/1/1990	
EQUI 134	Die Cast (DC22)	0.19	Material	tons	hours	1/1/1978	1/1/1978	
EQUI 135	Die Cast (DC35)	0.32	Material	tons	hours	1/1/1996	1/1/1996	

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 525 of 672

Subject Item Id	Emission Unit Description	Max Design Capacity	Material	Units Numerator	Units Denominator	Commence Construction Date	Initial Startup Date	Date Modified
EQUI 136	Die Cast (DC32)	0.45	Material	tons	hours	1/1/1995	1/1/1995	
EQUI 137	Die Cast (DC26)	0.12	Material	tons	hours	1/1/1992	1/1/1992	
EQUI 138	Die Cast (DC27)	0.28	Material	tons	hours	1/1/1992	1/1/1992	
EQUI 139	Die Cast (DC16)	0.3	Material	tons	hours	1/1/1973	1/1/1973	
EQUI 140	Die Cast (DC28)	0.23	Material	tons	hours	1/1/1994	1/1/1994	
EQUI 141	Die Cast (DC29)	0.13	Material	tons	hours	1/1/1995	1/1/1995	
EQUI 142	Die Cast (DC19)	0.12	Material	tons	hours	1/1/1973	1/1/1973	
EQUI 143	Die Cast (DC34)	0.22	Material	tons	hours	1/1/1984	1/1/1984	
EQUI 155	Die Cast (DC52)	0.2	Lead	tons	years	1/1/1996	1/1/1996	
EQUI 146	Die Cast (DC42)	0.6	Material	tons	hours	1/1/1999	1/1/1999	
EQUI 158	Die Cast (DC53)	0.59	Material	tons	hours	1/1/2017	1/1/2017	
EQUI 147	Die Cast (DC38)	0.6	Material	tons	hours	1/1/1998	1/1/1998	
EQUI 149	Die Cast (DC40)	0.19	Material	tons	hours	1/1/1987	1/1/1987	
EQUI 150	Die Cast (DC48)	0.31	Material	tons	hours	1/1/1992	1/1/1992	
EQUI 152	Die Cast (DC41)	0.12	Material	tons	hours	1/1/1999	1/1/1999	
EQUI 156	Die Cast (DC50)	0.43	Material	tons	hours	1/1/2008	1/1/2008	
EQUI 153	Die Cast (DC44)	0.59	Material	tons	hours	1/1/1999	1/1/1999	
EQUI 154	Die Cast (DC45)	0.51	Material	tons	hours	1/1/2000	1/1/2000	
EQUI 117	South Building R&D Coater	0.41	Coating	pounds	hours	2/15/2022	2/15/2022	
EQUI 160	Billet Saw	0.38	Material	tons	hours	1/1/1994	1/1/1994	
EQUI 167	Solvent Vapor Remediation System							
EQUI 106	Make-up Air Unit 1N	2.5	Heat	million British thermal units	hours	1/1/1993	1/1/1993	
EQUI 109	Make-up Air Unit 5N	4.95	Heat	million British thermal units	hours	1/1/2016	1/1/2016	
EQUI 115	DC Abrasive Blasting	210	Sand	pounds	hours	1/1/2015	1/1/2015	
EQUI 107	Make-up Air Unit 2N	6.05	Heat	million British thermal units	hours	1/1/2016	1/1/2016	

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 526 of 672

Subject Item Id	Emission Unit Description	Max Design Capacity	Material	Units Numerator	Units Denominator	Commence Construction Date	Initial Startup Date	Date Modified
EQUI 108	Make-up Air Unit 3N	5.61	Heat	million British thermal units	hours	1/1/2015	1/1/2015	
EQUI 111	Make-up Air Unit 9N	2.2	Heat	million British thermal units	hours	1/1/1995	1/1/1995	
EQUI 116	Battery Terminal Post Coater 30	16.3	Solvents	pounds	hours	1/1/2020	1/1/2020	
EQUI 233	Battery Terminal Post Coater 19	1.71	Coating	pounds	hours	1/1/2012	1/1/2012	1/12/2022
EQUI 110	Make-up Air Unit 6N	5.4	Heat	million British thermal units	hours	1/1/1997	1/1/1997	
EQUI 112	Make-up Air Unit 11N	4.61	Heat	million British thermal units	hours	1/1/1996	1/1/1996	
EQUI 172	Battery Terminal Post Coater 29	43.5	Solvents	pounds	hours	4/16/2020	4/16/2020	
EQUI 113	Tool room 1 Abrasive Blasting	314	Sand	pounds	hours	1/1/1979	1/1/1979	
EQUI 114	Tool room 2 Abrasive Blasting	231	Sand	pounds	hours	1/1/1989	1/1/1989	
EQUI 174	Solvent Distillation Unit	170	Material	gallons	each	1/1/1998	1/1/1998	
EQUI 222	Natural Gas Bake Oven	0.3	Heat	million British thermal units	each	1/1/1998	1/1/1998	
EQUI 223	Coining Booth 1	55	Material	pounds	hours	1/1/1998	1/1/1998	
EQUI 224	Coining Booth 2	40	Material	pounds	hours	1/1/1998	1/1/1998	
EQUI 225	Coining Booth 3	46	Material	pounds	hours	1/1/1998	1/1/1998	
EQUI 226	Coining Booth 4	17	Material	pounds	hours	1/1/1998	1/1/1998	
EQUI 227	Coining Booth 5	48	Material	pounds	hours	1/1/1998	1/1/1998	
EQUI 228	Coining Booth 6	62	Material	pounds	hours	1/1/1998	1/1/1998	
EQUI 229	Coining Booth 7	52	Material	pounds	hours	1/1/1998	1/1/1998	
EQUI 230	Coining Booth 8	79	Material	pounds	hours	1/1/1998	1/1/1998	
EQUI 231	Coining Booth 9	194	Material	pounds	hours	1/1/1998	1/1/1998	
EQUI 232	Coining Booth 10	138	Material	pounds	hours	1/1/1998	1/1/1998	

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

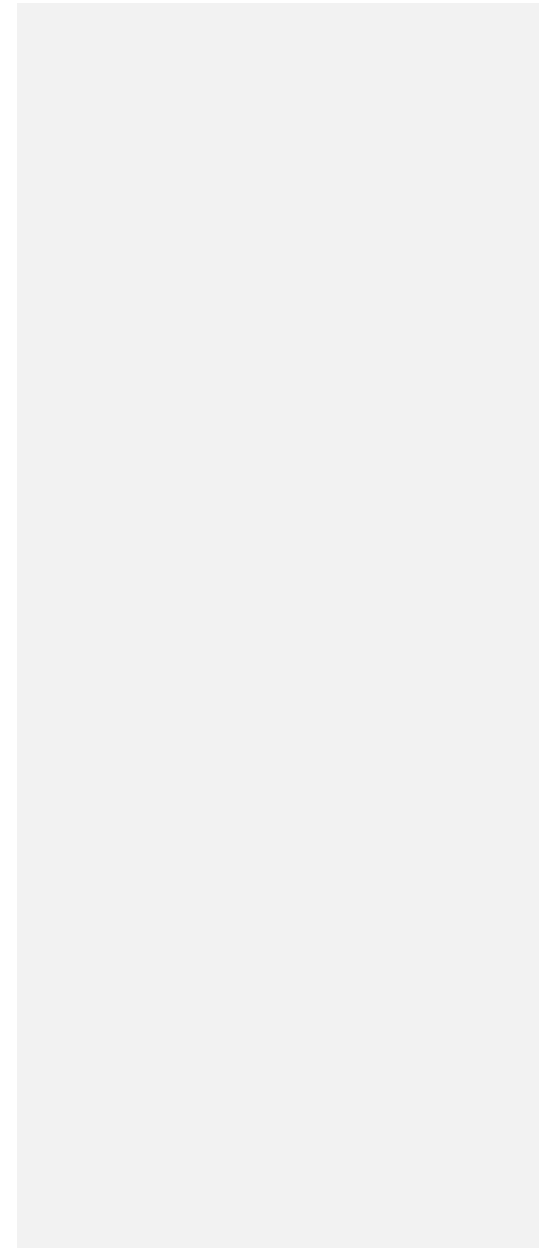
Page 527 of 672

Subject Item Id	Emission Unit Description	Max Design Capacity	Material	Units Numerator	Units Denominator	Commence Construction Date	Initial Startup Date	Date Modified
EQUI 240	Prototype Coater	1.32	Coating	pounds	hours	2/15/2022	2/15/2022	
EQUI 82	Battery Terminal Post Coater 6	0.82	Coating	pounds	hours	1/1/1996	1/1/1996	2/23/2021
EQUI 84	Battery Terminal Post Coater 9	1.32	Coating	pounds	hours	1/1/1998	1/1/1998	12/9/2021
EQUI 85	Battery Terminal Post Coater 10	22.06	Solvents	pounds	hours	1/1/1999	1/1/1999	
EQUI 87	Battery Terminal Post Coater 12	13.25	Solvents	pounds	hours	1/1/1998	1/1/1998	
EQUI 88	Battery Terminal Post Coater 15	4.73	Solvents	pounds	hours	1/1/1997	1/1/1997	
EQUI 89	Battery Terminal Post Coater 17	19.4	Solvents	pounds	hours	1/1/2000	1/1/2000	
EQUI 92	Battery Terminal Post Coater 20	19.69	Solvents	pounds	hours	1/1/2001	1/1/2001	
EQUI 93	Battery Terminal Post Coater 21	66.26	Solvents	pounds	hours	1/1/2004	1/1/2004	
EQUI 94	Battery Terminal Post Coater 22	15.03	Solvents	pounds	hours	1/1/2006	1/1/2006	
EQUI 95	Battery Terminal Post Coater 23	2.36	Solvents	pounds	hours	1/1/2008	1/1/2008	
EQUI 97	Battery Terminal Post Coater 25	5.25	Solvents	pounds	hours	1/1/2011	1/1/2011	
EQUI 98	Battery Terminal Post Coater 26	2.03	Solvents	pounds	hours	1/1/2012	1/1/2012	
EQUI 99	Battery Terminal Post Coater 27	17.46	Solvents	pounds	hours	1/1/2012	1/1/2012	
EQUI 100	Battery Terminal Post Coater 28	3.85	Solvents	pounds	hours	1/1/2018	1/1/2018	
EQUI 166	Coating Room Bulk Solvent Tank	5.06	Solvents	pounds	hours	1/1/1993	1/1/1993	
EQUI 173	Coating Room Soaker Tank	5.26	Solvents	pounds	hours	8/1/2019	8/1/2019	

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 528 of 672

Subject Item Id	Emission Unit Description	Max Design Capacity	Material	Units Numerator	Units Denominator	Commence Construction Date	Initial Startup Date	Date Modified
EQUI 219	Battery Terminal Post Coater 33	7.92	Coating	pounds	hours	2/16/2006	2/16/2006	
EQUI 220	Battery Terminal Post Coater 34	7.92	Coating	pounds	hours	2/16/2006	2/16/2006	



Appendix J. Coating usage tracking protocol

Water Gremlin recovers any coating that drips from parts or runs off from the coaters through a system that collects excess coating in a nearby trough or tray. These drain through a hose to a recovery bucket, from which coating is then poured back into that same coater. Water Gremlin's internal coating usage tracking sheet accounts for this recovered material. Tanks for each coater are weighed before use each day, and the recovery buckets are also weighed. See the Coating Tank Usage sheet (Figure J-1) below as an example. In this example, Coater 9 (water-based coating) uses two coating tanks and two recovery buckets.

- 1) The first coating tank weighed 110 pounds at the beginning of the day and 100 pounds at the beginning of first shift the next operating day, for a total use of 10 pounds.
- 2) The second coating tank weighed 168 pounds at the beginning of the day and 117 pounds at the beginning of first shift the next operating day, for a total use of 51 pounds. The sum of the total use in Coater 9 on this day was 61 pounds.
- 3) The first recovery bucket contained 6 pounds at the beginning of first shift the next operating day, and the second recovery bucket contained 35 pounds at the beginning of first shift the next operating day. The total recovered material from these two buckets was 41 pounds. These buckets were poured back into their respective Coater 9 coating tanks.
- 4) If a recovery bucket were to become filled during a shift, it would be poured into that coater's coating tank and not recorded as recovered coating nor as addition of new coating. In this way, mid-shift emptying of recovery buckets neither adds to total use, nor subtracts from it.
- 5) The daily use for Coater 9 on this example day would be recorded as 20 pounds (61 pounds total use minus 41 pounds recovered).

The Coating Mixer staff person will complete the attached sheet as tanks are weighed every morning. The sheet is then given to the Coating Room Supervisor who checks the calculations, verifies data, and calculates the daily use numbers for all coaters. These are entered into the Coating Use spreadsheet which is sent to the MPCA each day. The recovered coating collected in the various drip trays is collected and drained through hoses to buckets. This recovered coating does not leave the coating room, nor is it added to the soaker tank, nor does it go to the distiller. While the example given is for a water-based coater, this recovery process is representative of any coater using dip or drip method.

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 539 of 672

Figure J-1: Example coating tank usage tracking sheet

COATING TANK USAGE

Coater	Before	After	Total Use	Total Recovery	Daily Use	% Solids	Fluosolv Use	H2O Use	100% Fluosolv
6									
9	110 - 168 - _____	100 = 117 = _____	10 51 61 -	6 35 41 =	20	10%	0	0	0
10									
12									
15									
17									
18									
20									
21									
22									
25									

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 531 of 672

Appendix K. 40 CFR pt. 60, subp. IIII

§60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines;

(ii) The model year listed in Table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:

(i) Manufactured after April 1, 2006, and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart.

Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

(e) Owners and operators of facilities with CI ICE that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

Emission Standards for Manufacturers

§60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

- (1) Their 2007 model year through 2012 non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;
- (2) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and
- (3) Their 2013 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(e) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards and other requirements for new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.110, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, as applicable, for all pollutants, for the same displacement and maximum engine power:

- (1) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and
- (2) Their 2014 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(f) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary non-emergency CI ICE identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 1 to 40 CFR 1042.1 identifies 40 CFR part 1042 as being applicable, 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

- (1) Remote areas of Alaska; and
- (2) Marine offshore installations.

(g) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may

elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power, and displacement of the reconstructed stationary CI ICE.

(h) Stationary CI ICE certified to the standards in 40 CFR part 1039 and equipped with auxiliary emission control devices (AECs) as specified in 40 CFR 1039.665 must meet the Tier 1 certification emission standards for new nonroad CI engines in 40 CFR 89.112 while the AEC is activated during a qualified emergency situation. A qualified emergency situation is defined in 40 CFR 1039.665. When the qualified emergency situation has ended and the AEC is deactivated, the engine must resume meeting the otherwise applicable emission standard specified in this section.

§60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) [Reserved]

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

(e) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder;

(3) Their 2013 model year emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder; and

(4) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(f) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE to the certification emission standards and other requirements applicable to Tier 3 new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power less than 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(g) Notwithstanding the requirements in paragraphs (a) through (d) of this section, stationary emergency CI internal combustion engines identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 2 to 40 CFR 1042.101 identifies Tier 3 standards as being applicable, the requirements applicable to Tier 3 engines in 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Remote areas of Alaska; and

(2) Marine offshore installations.

(h) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (f) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed emergency stationary CI ICE.

§60.4203 How long must my engines meet the emission standards if I am a manufacturer of stationary CI internal combustion engines?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the certified emissions life of the engines.

Emission Standards for Owners and Operators

§60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of

pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 grams per kilowatt-hour (g/KW-hr) (12.7 grams per horsepower-hr (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012 and before January 1, 2016, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) For engines installed on or after January 1, 2016, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $9.0 \cdot n^{-0.20}$ g/KW-hr ($6.7 \cdot n^{-0.20}$ g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and

(iii) 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.

(4) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

(d) Owners and operators of non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in §60.4212.

(e) Owners and operators of any modified or reconstructed non-emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed non-emergency stationary CI ICE that are specified in paragraphs (a) through (d) of this section.

(f) Owners and operators of stationary CI ICE certified to the standards in 40 CFR part 1039 and equipped with AECDS as specified in 40 CFR 1039.665 must meet the Tier 1 certification emission standards for new nonroad CI engines in 40 CFR 89.112 while the AECDS is activated during a qualified emergency situation. A qualified emergency situation is defined in 40 CFR 1039.665. When the qualified emergency situation has ended and the AECDS is deactivated, the engine must resume meeting the otherwise applicable emission standard specified in this section.

§60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in Table 1 to this subpart. Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in this section.

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

- (i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;
- (ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and
- (iii) 9.8 g/kW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

- (i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;
- (ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and
- (iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

(e) Owners and operators of emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the NTE standards as indicated in §60.4212.

(f) Owners and operators of any modified or reconstructed emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed CI ICE that are specified in paragraphs (a) through (e) of this section.

§60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §60.4204 and 60.4205 over the entire life of the engine.

Fuel Requirements for Owners and Operators

§60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

- (a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).
- (b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.
- (c) [Reserved]
- (d) Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder are no longer subject to the requirements of paragraph (a) of this section, and must use fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).
- (e) Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section.

Other Requirements for Owners and Operators

§60.4208 What is the deadline for importing or installing stationary CI ICE produced in previous model years?

- (a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.
- (b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.
- (c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.
- (d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.
- (e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.
- (f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.
- (g) After December 31, 2018, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power greater than or equal to 600 KW (804 HP) and less than 2,000 KW (2,680 HP) and

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 538 of 672

displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that do not meet the applicable requirements for 2017 model year non-emergency engines.

(h) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (g) of this section after the dates specified in paragraphs (a) through (g) of this section.

(i) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

§60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

Compliance Requirements

§60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in §60.4201(a) through (c) and §60.4202(a), (b) and (d) using the certification procedures required in 40 CFR part 89, subpart B, or 40 CFR part 1039, subpart C, as applicable, and must test their engines as specified in those parts. For the purposes of this subpart, engines certified to the standards in table 1 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89. For the purposes of this subpart, engines certified to the standards in table 4 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89, except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in §60.4201(d) and (e) and §60.4202(e) and (f) using the certification procedures required in 40 CFR part 94, subpart C, or 40 CFR part 1042, subpart C, as applicable, and must test their engines as specified in 40 CFR part 94 or 1042, as applicable.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 1039.125, 1039.130, and 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89, 40 CFR part 94 or 40 CFR part 1042 for engines that would be covered by that part if they were

nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40 CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of 40 CFR 1068.230 would apply to engines for export and the manufacturers must label such engines according to 40 CFR 1068.230.

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate, but the words "stationary" must be included instead of "nonroad" or "marine" on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

(iii) Stationary CI internal combustion engines that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230.

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR parts 89, 94, 1039 or 1042 for that model year may certify any such family that contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

(e) Manufacturers of engine families discussed in paragraph (d) of this section may meet the labeling requirements referred to in paragraph (c) of this section for stationary CI ICE by either adding a separate label containing the information required in paragraph (c) of this section or by adding the words “and stationary” after the word “nonroad” or “marine,” as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine manufacturers must add a permanent label stating that the engine is for stationary emergency use only to each new emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the emission standards for emergency engines in §60.4202 but does not meet all the emission standards for non-emergency engines in §60.4201. The label must be added according to the labeling requirements specified in 40 CFR 1039.135(b). Engine manufacturers must specify in the owner's manual that operation of emergency engines is limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines and may test at the NFPA certified nameplate HP, provided that the engine is labeled as “Fire Pump Applications Only”.

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified to earlier standards that were manufactured before the new or changed standards took effect until inventories are depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers' normal industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine manufacturer may not circumvent the provisions of §60.4201 or §60.4202 by stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of 40 CFR 89.1003(b)(7), 40 CFR 94.1103(b)(3), 40 CFR 94.1103(b)(4) and 40 CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

(j) Stationary CI ICE manufacturers may equip their stationary CI internal combustion engines certified to the emission standards in 40 CFR part 1039 with AECDs for qualified emergency situations according to the requirements of 40 CFR 1039.665. Manufacturers of stationary CI ICE equipped with AECDs as allowed by 40 CFR 1039.665 must meet all of the requirements in 40 CFR 1039.665 that apply to manufacturers. Manufacturers must document that the engine complies with the Tier 1 standard in 40 CFR 89.112 when the AECD is activated. Manufacturers must provide any relevant testing, engineering analysis, or other information in sufficient detail to support such statement when applying for certification (including amending an existing certificate) of an engine equipped with an AECD as allowed by 40 CFR 1039.665.

§60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

- (1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;
- (2) Change only those emission-related settings that are permitted by the manufacturer; and
- (3) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a

CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

- (1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.
- (2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.
- (3) Keeping records of engine manufacturer data indicating compliance with the standards.
- (4) Keeping records of control device vendor data indicating compliance with the standards.
- (5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

- (1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.
- (2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.
 - (i) Identification of the specific parameters you propose to monitor continuously;
 - (ii) A discussion of the relationship between these parameters and NO_x and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NO_x and PM emissions;
 - (iii) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;
 - (iv) A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and
 - (v) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

(e) If you are an owner or operator of a modified or reconstructed stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(e) or §60.4205(f), you must demonstrate compliance according to one of the methods specified in paragraphs (e)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4204(e) or §60.4205(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4212 or §60.4213, as appropriate. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

(f) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

~~(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3. [vacated by May 4, 2016 court mandate]~~

~~(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. [vacated by May 4, 2016 court mandate]~~

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraph (f)(3)(i) of this section, the 50 hours per calendar year for non-emergency

situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

- (A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;
- (B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.
- (C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.
- (D) The power is provided only to the facility itself or to support the local transmission and distribution system.
- (E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

(g) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

- (1) If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.
- (2) If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.
- (3) If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 544 of 672

installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

(h) The requirements for operators and prohibited acts specified in 40 CFR 1039.665 apply to owners or operators of stationary CI ICE equipped with AECDs for qualified emergency situations as allowed by 40 CFR 1039.665.

Testing Requirements for Owners and Operators

§60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \quad (\text{Eq. 1})$$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 545 of 672

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c).

§60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted according to the requirements in §60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c).

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 2})$$

Where:

C_i = concentration of NO_x or PM at the control device inlet,

C_o = concentration of NO_x or PM at the control device outlet, and

R = percent reduction of NO_x or PM emissions.

(2) You must normalize the NO_x or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O₂) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO₂) using the procedures described in paragraph (d)(3) of this section.

$$C_{adj} = C_i \frac{5.9}{20.9 - \% O_2} \quad (\text{Eq. 3})$$

Where:

C_{adj} = Calculated NO_x or PM concentration adjusted to 15 percent O₂.

C_i = Measured concentration of NO_x or PM, uncorrected.

5.9 = 20.9 percent O₂–15 percent O₂, the defined O₂ correction value, percent.

%O₂ = Measured O₂ concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent O₂ and CO₂ concentration is measured in lieu of O₂ concentration measurement, a CO₂ correction factor is needed. Calculate the CO₂ correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209}{F_e} \quad (\text{Eq. 4})$$

Where:

F_o = Fuel factor based on the ratio of O₂ volume to the ultimate CO₂ volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O₂, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm³/J (dscf/106 Btu).

F_e = Ratio of the volume of CO₂ produced to the gross calorific value of the fuel from Method 19, dsm³/J (dscf/106 Btu).

(ii) Calculate the CO₂ correction factor for correcting measurement data to 15 percent O₂, as follows:

$$X_{\text{CO}_2} = \frac{5.9}{F_o} \quad (\text{Eq. 5})$$

Where:

X_{CO₂} = CO₂ correction factor, percent.

5.9 = 20.9 percent O₂-15 percent O₂, the defined O₂ correction value, percent.

(iii) Calculate the NO_x and PM gas concentrations adjusted to 15 percent O₂ using CO₂ as follows:

$$C_{\text{adj}} = C_d \frac{X_{\text{CO}_2}}{\% \text{CO}_2} \quad (\text{Eq. 6})$$

Where:

C_{adj} = Calculated NO_x or PM concentration adjusted to 15 percent O₂.

C_d = Measured concentration of NO_x or PM, uncorrected.

%CO₂ = Measured CO₂ concentration, dry basis, percent.

(e) To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 7 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{\text{KW-hour}} \quad (\text{Eq. 7})$$

Where:

ER = Emission rate in grams per KW-hour.

C_d = Measured NO_x concentration in ppm.

1.912x10⁻³ = Conversion constant for ppm NO_x to grams per standard cubic meter at 25 degrees Celsius.

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 547 of 672

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

$$ER = \frac{C_{adj} \times Q \times T}{KW\text{-hour}} \quad (\text{Eq 8})$$

Where:

ER = Emission rate in grams per KW-hour.

C_{adj} = Calculated PM concentration in grams per standard cubic meter.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

Notification, Reports, and Records for Owners and Operators

§60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section.

(i) Name and address of the owner or operator;

(ii) The address of the affected source;

(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

(i) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

(d) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in §60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4211(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §60.4.

(e) Owners or operators of stationary CI ICE equipped with AECDs pursuant to the requirements of 40 CFR 1039.665 must report the use of AECDs as required by 40 CFR 1039.665(e).

Special Requirements

§60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) Stationary CI ICE with a displacement of less than 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §§60.4202 and 60.4205.

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in §60.4207.

(c) Stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the following emission standards:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

§60.4216 What requirements must I meet for engines used in Alaska?

(a) Prior to December 1, 2010, owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder located in areas of Alaska not accessible by the FAHS should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) Except as indicated in paragraph (c) of this section, manufacturers, owners and operators of stationary CI ICE with a displacement of less than 10 liters per cylinder located in remote areas of Alaska may meet the requirements of this subpart by manufacturing and installing engines meeting the requirements of 40 CFR parts 94 or 1042, as appropriate, rather than the otherwise applicable requirements of 40 CFR parts 89 and 1039, as indicated in §§60.4201(f) and 60.4202(g).

(c) Manufacturers, owners and operators of stationary CI ICE that are located in remote areas of Alaska may choose to meet the applicable emission standards for emergency engines in §§60.4202 and 60.4205, and not those for non-emergency engines in §§60.4201 and 60.4204, except that for 2014 model year and later non-emergency CI ICE, the owner or operator of any such engine that was not certified as meeting Tier 4 PM standards, must meet the applicable requirements for PM in §§60.4201 and 60.4204 or install a PM emission control device that achieves

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 550 of 672

PM emission reductions of 85 percent, or 60 percent for engines with a displacement of greater than or equal to 30 liters per cylinder, compared to engine-out emissions.

(d) The provisions of §60.4207 do not apply to owners and operators of pre-2014 model year stationary CI ICE subject to this subpart that are located in remote areas of Alaska.

(e) The provisions of §60.4208(a) do not apply to owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS until after December 31, 2009.

(f) The provisions of this section and §60.4207 do not prevent owners and operators of stationary CI ICE subject to this subpart that are located in remote areas of Alaska from using fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel. The sulfur content of the used lubricating oil must be less than 200 parts per million. The used lubricating oil must meet the on-specification levels and properties for used oil in 40 CFR 279.11.

§60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

Owners and operators of stationary CI ICE that do not use diesel fuel may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4204 or §60.4205 using such fuels and that use of such fuel is appropriate and reasonably necessary, considering cost, energy, technical feasibility, human health and environmental, and other factors, for the operation of the engine.

General Provisions

§60.4218 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Definitions

§60.4219 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for certified emissions life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-

components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Date of manufacture means one of the following things:

- (1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.
- (2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.
- (3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

Diesel particulate filter means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in §60.4211(f) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in §60.4211(f), then it is not considered to be an emergency stationary ICE under this subpart.

- (1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc.
- (2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §60.4211(f).
- (3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §60.4211(f)(2)(ii) or (iii) and §60.4211(f)(3)(i).

Engine manufacturer means the manufacturer of the engine. See the definition of "manufacturer" in this section.

Fire pump engine means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

Freshly manufactured engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced.

Installed means the engine is placed and secured at the location where it is intended to be operated.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for sale or resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1039.801.

Model year means the calendar year in which an engine is manufactured (see "date of manufacture"), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see "date of manufacture"), if the annual new model production period is different than the calendar year and includes January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year.

(2) For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was manufactured (see "date of manufacture").

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Reciprocating internal combustion engine means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

Remote areas of Alaska means areas of Alaska that meet either paragraph (1) or (2) of this definition.

- (1) Areas of Alaska that are not accessible by the Federal Aid Highway System (FAHS).
- (2) Areas of Alaska that meet all of the following criteria:

(i) The only connection to the FAHS is through the Alaska Marine Highway System, or the stationary CI ICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary CI ICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the source is less than 12 megawatts, or the stationary CI ICE is used exclusively for backup power for renewable energy.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to a gasoline, natural gas, or liquefied petroleum gas fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle, aircraft, or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Subpart means 40 CFR part 60, subpart IIII.

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 553 of 672

Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007-2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder

[As stated in §§60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007-2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO _x	HC	NO _x	CO	PM
KW<8 (HP<11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8≤KW<19 (11≤HP<25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37≤KW<56 (50≤HP<75)			9.2 (6.9)		
56≤KW<75 (75≤HP<100)			9.2 (6.9)		
75≤KW<130 (100≤HP<175)			9.2 (6.9)		
130≤KW<225 (175≤HP<300)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
225≤KW<450 (300≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450≤KW≤560 (600≤HP≤750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

Table 2 to Subpart IIII of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder

[As stated in §60.4202(a)(1), you must comply with the following emission standards]

Engine power	Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 554 of 672

	Model year(s)	NO _x + NMHC	CO	PM
KW<8 (HP<11)	2008 +	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2008 +	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2008 +	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines

As stated in §60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines according to §60.4202(d) ¹
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

¹Manufacturers of fire pump stationary CI ICE with a maximum engine power greater than or equal to 37 kW (50 HP) and less than 450 kW (600 HP) and a rated speed of greater than 2,650 revolutions per minute (rpm) are not required to certify such engines until three model years following the model year indicated in this Table 3 for engines in the applicable engine power category.

Table 4 to Subpart IIII of Part 60—Emission Standards for Stationary Fire Pump Engines

[As stated in §§60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 555 of 672

Maximum engine power	Model year(s)	NMHC + NO _x	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011 +	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011 +	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	2011 +	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011 + ¹	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011 + ¹	4.7 (3.5)		0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010 + ²	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009 + ³	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009 + ³	4.0 (3.0)		0.20 (0.15)
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009 +	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008 +	6.4 (4.8)		0.20 (0.15)

¹For model years 2011-2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

²For model years 2010-2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

³In model years 2009-2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 556 of 672

Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

[You must comply with the labeling requirements in §60.4210(f) and the recordkeeping requirements in §60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	Starting model year
19≤KW<56 (25≤HP<75)	2013
56≤KW<130 (75≤HP<175)	2012
KW≥130 (HP≥175)	2011

Table 6 to Subpart IIII of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines

[As stated in §60.4210(g), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

Mode No.	Engine speed ¹	Torque (percent) ²	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

¹Engine speed: ±2 percent of point.

²Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.

Table 7 to Subpart IIII of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder

As stated in §60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:

Each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary CI internal combustion engine with a displacement of	a. Reduce NO _x emissions by 90 percent or more;	i. Select the sampling port location and number/location of traverse points at the inlet and outlet of the control device;		(a) For NO _x , O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 557 of 672

Each	Complying with the requirement to	You must	Using	According to the following requirements
≥ 30 liters per cylinder				sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Measure O ₂ at the inlet and outlet of the control device;	(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for NO _x concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurements for NO _x concentration.
		iv. Measure NO _x at the inlet and outlet of the control device.	(3) Method 7E of 40 CFR part 60, appendix A-4, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(d) NO _x concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

Each	Complying with the requirement to	You must	Using	According to the following requirements
	b. Limit the concentration of NO _x in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and number/location of traverse points at the exhaust of the stationary internal combustion engine;		(a) For NO _x , O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurement for NO _x concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO _x concentration.
		iv. Measure NO _x at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site	(3) Method 7E of 40 CFR part 60, appendix A-4, Method 320 of 40 CFR part 63,	(d) NO _x concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 559 of 672

Each	Complying with the requirement to	You must	Using	According to the following requirements
		must be located at the outlet of the control device.	appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	of the three 1-hour or longer runs.
	c. Reduce PM emissions by 60 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O ₂ at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(3) Method 4 of 40 CFR part 60, appendix A-3	(c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the inlet and outlet of the control device.	(4) Method 5 of 40 CFR part 60, appendix A-3	(d) PM concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for PM concentration.

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 560 of 672

Each	Complying with the requirement to	You must	Using	According to the following requirements
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(3) Method 4 of 40 CFR part 60, appendix A-3	(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the exhaust of the stationary internal combustion engine.	(4) Method 5 of 40 CFR part 60, appendix A-3	(d) PM concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII

[As stated in §60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4219.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4214(a).
§60.8	Performance tests	Yes	Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 561 of 672

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart IIII.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	Yes	Except that §60.13 only applies to stationary CI ICE with a displacement of (\geq 30 liters per cylinder.
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 562 of 672

Appendix L. 40 CFR pt. 60, subp. A – General Provisions

§60.1 Applicability.

(a) Except as provided in subparts B and C, the provisions of this part apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

(b) Any new or revised standard of performance promulgated pursuant to section 111(b) of the Act shall apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of such new or revised standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.

(c) In addition to complying with the provisions of this part, the owner or operator of an affected facility may be required to obtain an operating permit issued to stationary sources by an authorized State air pollution control agency or by the Administrator of the U.S. Environmental Protection Agency (EPA) pursuant to Title V of the Clean Air Act (Act) as amended November 15, 1990 (42 U.S.C. 7661). For more information about obtaining an operating permit see part 70 of this chapter.

(d) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia.*

(1) This paragraph applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia ("site").

(2) Except for compliance with 40 CFR 60.49b(u), the site shall have the option of either complying directly with the requirements of this part, or reducing the site-wide emissions caps in accordance with the procedures set forth in a permit issued pursuant to 40 CFR 52.2454. If the site chooses the option of reducing the site-wide emissions caps in accordance with the procedures set forth in such permit, the requirements of such permit shall apply in lieu of the otherwise applicable requirements of this part.

(3) Notwithstanding the provisions of paragraph (d)(2) of this section, for any provisions of this part except for Subpart Kb, the owner/operator of the site shall comply with the applicable provisions of this part if the Administrator determines that compliance with the provisions of this part is necessary for achieving the objectives of the regulation and the Administrator notifies the site in accordance with the provisions of the permit issued pursuant to 40 CFR 52.2454.

§60.2 Definitions.

The terms used in this part are defined in the Act or in this section as follows:

Act means the Clean Air Act (42 U.S.C. 7401 *et seq.*)

Administrator means the Administrator of the Environmental Protection Agency or his authorized representative.

Affected facility means, with reference to a stationary source, any apparatus to which a standard is applicable.

Alternative method means any method of sampling and analyzing for an air pollutant which is not a reference or equivalent method but which has been demonstrated to the Administrator's satisfaction to, in specific cases, produce results adequate for his determination of compliance.

Approved permit program means a State permit program approved by the Administrator as meeting the requirements of part 70 of this chapter or a Federal permit program established in this chapter pursuant to Title V of the Act (42 U.S.C. 7661).

Capital expenditure means an expenditure for a physical or operational change to an existing facility which exceeds the product of the applicable "annual asset guideline repair allowance percentage" specified in the latest edition of

Internal Revenue Service (IRS) Publication 534 and the existing facility's basis, as defined by section 1012 of the Internal Revenue Code. However, the total expenditure for a physical or operational change to an existing facility must not be reduced by any "excluded additions" as defined in IRS Publication 534, as would be done for tax purposes.

Clean coal technology demonstration project means a project using funds appropriated under the heading 'Department of Energy-Clean Coal Technology', up to a total amount of \$2,500,000,000 for commercial demonstrations of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency.

Commenced means, with respect to the definition of *new source* in section 111(a)(2) of the Act, that an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

Construction means fabrication, erection, or installation of an affected facility.

Continuous monitoring system means the total equipment, required under the emission monitoring sections in applicable subparts, used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters.

Electric utility steam generating unit means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

Equivalent method means any method of sampling and analyzing for an air pollutant which has been demonstrated to the Administrator's satisfaction to have a consistent and quantitatively known relationship to the reference method, under specified conditions.

Excess Emissions and Monitoring Systems Performance Report is a report that must be submitted periodically by a source in order to provide data on its compliance with stated emission limits and operating parameters, and on the performance of its monitoring systems.

Existing facility means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in this part, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type.

Force majeure means, for purposes of §60.8, an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents the owner or operator from complying with the regulatory requirement to conduct performance tests within the specified timeframe despite the affected facility's best efforts to fulfill the obligation. Examples of such events are acts of nature, acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility.

Isokinetic sampling means sampling in which the linear velocity of the gas entering the sampling nozzle is equal to that of the undisturbed gas stream at the sample point.

Issuance of a part 70 permit will occur, if the State is the permitting authority, in accordance with the requirements of part 70 of this chapter and the applicable, approved State permit program. When the EPA is the permitting authority, issuance of a Title V permit occurs immediately after the EPA takes final action on the final permit.

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 564 of 672

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Modification means any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.

Monitoring device means the total equipment, required under the monitoring of operations sections in applicable subparts, used to measure and record (if applicable) process parameters.

Nitrogen oxides means all oxides of nitrogen except nitrous oxide, as measured by test methods set forth in this part.

One-hour period means any 60-minute period commencing on the hour.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Owner or operator means any person who owns, leases, operates, controls, or supervises an affected facility or a stationary source of which an affected facility is a part.

Part 70 permit means any permit issued, renewed, or revised pursuant to part 70 of this chapter.

Particulate matter means any finely divided solid or liquid material, other than uncombined water, as measured by the reference methods specified under each applicable subpart, or an equivalent or alternative method.

Permit program means a comprehensive State operating permit system established pursuant to title V of the Act (42 U.S.C. 7661) and regulations codified in part 70 of this chapter and applicable State regulations, or a comprehensive Federal operating permit system established pursuant to title V of the Act and regulations codified in this chapter.

Permitting authority means:

- (1) The State air pollution control agency, local agency, other State agency, or other agency authorized by the Administrator to carry out a permit program under part 70 of this chapter; or
- (2) The Administrator, in the case of EPA-implemented permit programs under title V of the Act (42 U.S.C. 7661).

Proportional sampling means sampling at a rate that produces a constant ratio of sampling rate to stack gas flow rate.

Reactivation of a very clean coal-fired electric utility steam generating unit means any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:

- (1) Has not been in operation for the two-year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority's emissions inventory at the time of enactment;
- (2) Was equipped prior to shut-down with a continuous system of emissions control that achieves a removal efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;
- (3) Is equipped with low-NO_x burners prior to the time of commencement of operations following reactivation; and
- (4) Is otherwise in compliance with the requirements of the Clean Air Act.

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 565 of 672

Reference method means any method of sampling and analyzing for an air pollutant as specified in the applicable subpart.

Repowering means replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990. Repowering shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

Run means the net period of time during which an emission sample is collected. Unless otherwise specified, a run may be either intermittent or continuous within the limits of good engineering practice.

Shutdown means the cessation of operation of an affected facility for any purpose.

Six-minute period means any one of the 10 equal parts of a one-hour period.

Standard means a standard of performance proposed or promulgated under this part.

Standard conditions means a temperature of 293 K (68F) and a pressure of 101.3 kilopascals (29.92 in Hg).

Startup means the setting in operation of an affected facility for any purpose.

State means all non-Federal authorities, including local agencies, interstate associations, and State-wide programs, that have delegated authority to implement: (1) The provisions of this part; and/or (2) the permit program established under part 70 of this chapter. The term State shall have its conventional meaning where clear from the context.

Stationary source means any building, structure, facility, or installation which emits or may emit any air pollutant.

Title V permit means any permit issued, renewed, or revised pursuant to Federal or State regulations established to implement title V of the Act (42 U.S.C. 7661). A title V permit issued by a State permitting authority is called a part 70 permit in this part.

Volatile Organic Compound means any organic compound which participates in atmospheric photochemical reactions; or which is measured by a reference method, an equivalent method, an alternative method, or which is determined by procedures specified under any subpart.

§60.3 Units and abbreviations.

Used in this part are abbreviations and symbols of units of measure. These are defined as follows:

(a) System International (SI) units of measure:

A—ampere g—

gram Hz—hertz

J—joule K—

degree Kelvin

kg—kilogram

m—meter

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 566 of 672

m³—cubic meter mg—
milligram—10⁻³ gram mm—
millimeter—10⁻³ meter Mg—
megagram—10⁶ gram mol—
mole
N—newton ng—nanogram—
10⁻⁹ gram nm—nanometer—
10⁻⁹ meter Pa—pascal
s—second
V—volt
W—watt
Ω—ohm
μg—microgram—10⁻⁶ gram

(b) Other units of measure:

Btu—British thermal unit
°C—degree Celsius (centigrade)
cal—calorie
cfm—cubic feet per minute
cu ft—cubic feet
dcf—dry cubic feet
dcm—dry cubic meter
dscf—dry cubic feet at standard conditions
dscm—dry cubic meter at standard conditions
eq—equivalent
°F—degree Fahrenheit
ft—feet
gal—gallon
gr—grain
g-eq—gram equivalent
hr—hour
in—inch
k—1,000

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 567 of 672

l—liter
lpm—liter per minute
lb—pound meq—
milliequivalent min—
minute ml—milliliter
mol. wt.—molecular weight
ppb—parts per billion ppm—
parts per million
psia—pounds per square inch absolute
psig—pounds per square inch gage
°R—degree Rankine
scf—cubic feet at standard conditions scfh—
cubic feet per hour at standard conditions
scm—cubic meter at standard conditions sec—
second
sq ft—square feet
std—at standard conditions

(c) Chemical nomenclature:

CdS—cadmium sulfide
CO—carbon monoxide
CO₂—carbon dioxide
HCl—hydrochloric acid
Hg—mercury H₂O—
water H₂S—hydrogen
sulfide H₂SO₄—sulfuric
acid N₂—nitrogen
NO—nitric oxide
NO₂—nitrogen dioxide
NO_x—nitrogen oxides
O₂—oxygen SO₂—
sulfur dioxide

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 568 of 672

SO₃—sulfur trioxide SO_x—
sulfur oxides

(d) Miscellaneous:

A.S.T.M.—American Society for Testing and Materials

§60.4 Address.

(a) All requests, reports, applications, submittals, and other communications to the Administrator pursuant to this part shall be submitted in duplicate to the appropriate Regional Office of the U.S. Environmental Protection Agency to the attention of the Director of the Division indicated in the following list of EPA Regional Offices.

Region I (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont), Director, Office of Ecosystem Protection, U.S. Environmental Protection Agency, 5 Post Office Square—Suite 100, Boston, MA 02109-3912.

Region II (New Jersey, New York, Puerto Rico, Virgin Islands), Director, Air and Waste Management Division, U.S. Environmental Protection Agency, Federal Office Building, 26 Federal Plaza (Foley Square), New York, NY 10278.

Region III (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia), Director, Air Protection Division, Mail Code 3AP00, 1650 Arch Street, Philadelphia, PA 19103-2029.

Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee), Director, Air, Pesticides and Toxics Management Division, U.S. Environmental Protection Agency, 61 Forsyth St. SW., Suite 9T43, Atlanta, Georgia 30303-8960.

Region V (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin), Director, Air and Radiation Division, U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, IL 60604-3590.

Region VI (Arkansas, Louisiana, New Mexico, Oklahoma, Texas); Director, Air, Pesticides, and Toxics Division; U.S. Environmental Protection Agency, 1445 Ross Avenue, Dallas, TX 75202.

Region VII (Iowa, Kansas, Missouri, Nebraska), Director, Air and Waste Management Division, 11201 Renner Boulevard, Lenexa, Kansas 66219.

Region VIII (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming) Director, Air and Toxics Technical Enforcement Program, Office of Enforcement, Compliance and Environmental Justice, Mail Code 8ENF-AT, 1595 Wynkoop Street, Denver, CO 80202-1129.

Region IX (Arizona, California, Hawaii and Nevada; the territories of American Samoa and Guam; the Commonwealth of the Northern Mariana Islands; the territories of Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Atoll, Palmyra Atoll, and Wake Islands; and certain U.S. Government activities in the freely associated states of the Republic of the Marshall Islands, the Federated States of Micronesia, and the Republic of Palau), Director, Air Division, U.S. Environmental Protection Agency, 75 Hawthorne Street, San Francisco, CA 94105.

Region X (Alaska, Oregon, Idaho, Washington), Director, Air and Waste Management Division, U.S. Environmental Protection Agency, 1200 Sixth Avenue, Seattle, WA 98101.

(b) Section 111(c) directs the Administrator to delegate to each State, when appropriate, the authority to implement and enforce standards of performance for new stationary sources located in such State. All information required to be submitted to EPA under paragraph (a) of this section, must also be submitted to the appropriate State Agency of any State to which this authority has been delegated (provided, that each specific delegation may except sources from a certain Federal or State reporting requirement). The appropriate mailing address for those States whose delegation request has been approved is as follows:

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 569 of 672

(1) [Reserved]

(2) State of Alabama: Alabama Department of Environmental Management, P.O. Box 301463, Montgomery, Alabama 36130-1463.

(3) State of Alaska, Department of Environmental Conservation, Pouch O, Juneau, AK 99811.

(4) Arizona:

Arizona Department of Environmental Quality, 1110 West Washington Street, Phoenix, AZ 85007.

Maricopa County Air Quality Department, 1001 North Central Avenue, Suite 900, Phoenix, AZ 85004.

Pima County Department of Environmental Quality, 33 North Stone Avenue, Suite 700, Tucson, AZ 85701.

Pinal County Air Quality Control District, 31 North Pinal Street, Building F, Florence, AZ 85132.

NOTE: For tables listing the delegation status of agencies in Region IX, see paragraph (d) of this section.

(5) State of Arkansas: Chief, Division of Air Pollution Control, Arkansas Department of Pollution Control and Ecology, 8001 National Drive, P.O. Box 9583, Little Rock, AR 72209.

(6) California:

Amador County Air Pollution Control District, 12200-B Airport Road, Jackson, CA 95642.

Antelope Valley Air Quality Management District, 43301 Division Street, Suite 206, Lancaster, CA 93535.

Bay Area Air Quality Management District, 939 Ellis Street, San Francisco, CA 94109.

Butte County Air Quality Management District, 2525 Dominic Drive, Suite J, Chico, CA 95928.

Calaveras County Air Pollution Control District, 891 Mountain Ranch Road, San Andreas, CA 95249.

Colusa County Air Pollution Control District, 100 Sunrise Blvd., Suite A-3, Colusa, CA 95932-3246.

El Dorado County Air Quality Management District, 2850 Fairlane Court, Bldg. C, Placerville, CA 95667-4100.

Eastern Kern Air Pollution Control District, 2700 "M" Street, Suite 302, Bakersfield, CA 93301-2370.

Feather River Air Quality Management District, 1007 Live Oak Blvd., Suite B-3, Yuba City, CA 95991.

Glenn County Air Pollution Control District, 720 N. Colusa Street, P.O. Box 351, Willows, CA 95988-0351.

Great Basin Unified Air Pollution Control District, 157 Short Street, Suite 6, Bishop, CA 93514-3537.

Imperial County Air Pollution Control District, 150 South Ninth Street, El Centro, CA 92243-2801.

Lake County Air Quality Management District, 885 Lakeport Blvd., Lakeport, CA 95453-5405.

Lassen County Air Pollution Control District, 707 Nevada Street, Suite 1, Susanville, CA 96130.

Mariposa County Air Pollution Control District, P.O. Box 5, Mariposa, CA 95338.

Mendocino County Air Quality Management District, 306 E. Gobbi Street, Ukiah, CA 95482-5511.

Modoc County Air Pollution Control District, 619 North Main Street, Alturas, CA 96101.

Mojave Desert Air Quality Management District, 14306 Park Avenue, Victorville, CA 92392-2310.

Monterey Bay Unified Air Pollution Control District, 24580 Silver Cloud Court, Monterey, CA 93940.

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 570 of 672

North Coast Unified Air Quality Management District, 2300 Myrtle Avenue, Eureka, CA 95501-3327.

Northern Sierra Air Quality Management District, 200 Litton Drive, Suite 320, P.O. Box 2509, Grass Valley, CA 95945-2509.

Northern Sonoma County Air Pollution Control District, 150 Matheson Street, Healdsburg, CA 95448-4908.

Placer County Air Pollution Control District, 3091 County Center Drive, Suite 240, Auburn, CA 95603.

Sacramento Metropolitan Air Quality Management District, 777 12th Street, Third Floor, Sacramento, CA 95814-1908.

San Diego County Air Pollution Control District, 10124 Old Grove Road, San Diego, CA 92131-1649.

San Joaquin Valley Air Pollution Control District, 1990 E. Gettysburg, Fresno, CA 93726.

San Luis Obispo County Air Pollution Control District, 3433 Roberto Court, San Luis Obispo, CA 93401-7126.

Santa Barbara County Air Pollution Control District, 260 North San Antonio Road, Suite A, Santa Barbara, CA 93110-1315.

Shasta County Air Quality Management District, 1855 Placer Street, Suite 101, Redding, CA 96001-1759.

Siskiyou County Air Pollution Control District, 525 So. Foothill Drive, Yreka, CA 96097-3036.

South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, CA 91765-4182.

Tehama County Air Pollution Control District, P.O. Box 8069 (1750 Walnut Street), Red Bluff, CA 96080-0038.

Tuolumne County Air Pollution Control District, 22365 Airport, Columbia, CA 95310.

Ventura County Air Pollution Control District, 669 County Square Drive, 2nd Floor, Ventura, CA 93003-5417.

Yolo-Solano Air Quality Management District, 1947 Galileo Court, Suite 103, Davis, CA 95616-4882.

NOTE: For tables listing the delegation status of agencies in Region IX, see paragraph (d) of this section.

(7) State of Colorado, Department of Public Health and Environment, 4300 Cherry Creek Drive South, Denver, CO 80222-1530.

NOTE: For a table listing Region VIII's NSPS delegation status, see paragraph (c) of this section.

(8) State of Connecticut, Bureau of Air Management, Department of Environmental Protection, State Office Building, 165 Capitol Avenue, Hartford, CT 06106.

(9) State of Delaware, Department of Natural Resources & Environmental Control, 89 Kings Highway, P.O. Box 1401, Dover, Delaware 19903.

(10) District of Columbia, Department of Public Health, Air Quality Division, 51 N Street, NE., Washington, DC 20002.

(11) State of Florida: Florida Department of Environmental Protection, Division of Air Resources Management, 2600 Blair Stone Road, MS 5500, Tallahassee, Florida 32399-2400.

(12) State of Georgia: Georgia Department of Natural Resources, Environmental Protection Division, Air Protection Branch, 4244 International Parkway, Suite 120, Atlanta, Georgia 30354.

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 571 of 672

(13) Hawaii:

Clean Air Branch, Hawaii Department of Health, 919 Ala Moana Blvd., Suite 203, Honolulu, HI 96814.

NOTE: For tables listing the delegation status of agencies in Region IX, see paragraph (d) of this section.

(14) State of Idaho, Department of Health and Welfare, Statehouse, Boise, ID 83701.

(15) State of Illinois: Illinois Environmental Protection Agency, 1021 North Grand Avenue East, Springfield, Illinois 62794.

(16) State of Indiana: Indiana Department of Environmental Management, Office of Air Quality, 100 North Senate Avenue, Indianapolis, Indiana 46204.

(17) State of Iowa: Iowa Department of Natural Resources, Environmental Protection Division, Air Quality Bureau, 7900 Hickman Road, Suite 1, Urbandale, IA 50322.

(18) State of Kansas: Kansas Department of Health and Environment, Bureau of Air and Radiation, 1000 S.W. Jackson, Suite 310, Topeka, KS 66612-1366.

(19) Commonwealth of Kentucky: Kentucky Department for Environmental Protection, Division for Air Quality, 300 Sower Boulevard, 2nd Floor, Frankfort, Kentucky 40601 or local agency, Louisville Metro Air Pollution Control District, 701 W. Ormsby Ave., Suite 303, Louisville, Kentucky 40203.

(20) State of Louisiana: Louisiana Department of Environmental Quality, P.O. Box 4301, Baton Rouge, Louisiana 70821-4301.

NOTE: For a list of delegated standards for Louisiana (excluding Indian country), see paragraph (e)(2) of this section.

(21) State of Maine, Bureau of Air Quality Control, Department of Environmental Protection, State House, Station No. 17, Augusta, ME 04333.

(22) State of Maryland, Department of the Environment, 1800 Washington Boulevard, Suite 705, Baltimore, Maryland 21230.

(23) Commonwealth of Massachusetts, Division of Air Quality Control, Department of Environmental Protection, One Winter Street, 7th floor, Boston, MA 02108.

(24) State of Michigan: Michigan Department of Natural Resources and Environment, Air Quality Division, P.O. Box 30028, Lansing, Michigan 48909.

(25) State of Minnesota: Minnesota Pollution Control Agency, Division of Air Quality, 520 Lafayette Road North, St. Paul, Minnesota 55155.

(26) State of Mississippi: Hand Deliver or Courier: Mississippi Department of Environmental Quality, Office of Pollution Control, Air Division, 515 East Amite Street, Jackson, Mississippi 39201, Mailing Address: Mississippi Department of Environmental Quality, Office of Pollution Control, Air Division, P.O. Box 2261, Jackson, Mississippi 39225.

(27) State of Missouri: Missouri Department of Natural Resources, Division of Environmental Quality, P.O. Box 176, Jefferson City, MO 65102.

(28) State of Montana, Department of Environmental Quality, 1520 E. 6th Ave., PO Box 200901, Helena, MT 59620-0901.

NOTE: For a table listing Region VIII's NSPS delegation status, see paragraph (c) of this section.

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 572 of 672

(29) State of Nebraska, Nebraska Department of Environmental Control, P.O. Box 94877, State House Station, Lincoln, NE 68509.

Lincoln-Lancaster County Health Department, Division of Environmental Health, 2200 St. Marys Avenue, Lincoln, NE 68502

(30) Nevada:

Nevada Division of Environmental Protection, 901 South Stewart Street, Suite 4001, Carson City, NV 89701-5249.

Clark County Department of Air Quality and Environmental Management, 500 S. Grand Central Parkway, 1st Floor, P.O. Box 555210, Las Vegas, NV 89155-5210.

Washoe County Health District, Air Quality Management Division, 1001 E. 9th Street, Building A, Suite 115A, Reno, NV 89520.

NOTE: For tables listing the delegation status of agencies in Region IX, see paragraph (d) of this section.

(31) State of New Hampshire, Air Resources Division, Department of Environmental Services, 64 North Main Street, Caller Box 2033, Concord, NH 03302-2033.

(32) State of New Jersey: New Jersey Department of Environmental Protection, Division of Environmental Quality, Enforcement Element, John Fitch Plaza, CN-027, Trenton, NJ 08625.

(1) The following table lists the specific source and pollutant categories that have been delegated to the states in Region II. The (X) symbol is used to indicate each category that has been delegated.

	Subpart	State			
		New Jersey	New York	Puerto Rico	Virgin Islands
D	Fossil-Fuel Fired Steam Generators for Which Construction Commenced After August 17, 1971 (Steam Generators and Lignite Fired Steam Generators)	X	X	X	X
Da	Electric Utility Steam Generating Units for Which Construction Commenced After September 18, 1978	X		X	
Db	Industrial-Commercial-Institutional Steam Generating Units	X	X	X	X
E	Incinerators	X	X	X	X
F	Portland Cement Plants	X	X	X	X
G	Nitric Acid Plants	X	X	X	X
H	Sulfuric Acid Plants	X	X	X	X
I	Asphalt Concrete Plants	X	X	X	X
J	Petroleum Refineries—(All Categories)	X	X	X	X
K	Storage Vessels for Petroleum Liquids Constructed After June 11, 1973, and prior to May 19, 1978	X	X	X	X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 573 of 672

Ka	Storage Vessels for Petroleum Liquids Constructed After May 18, 1978	X	X	X	
L	Secondary Lead Smelters	X	X	X	X
M	Secondary Brass and Bronze Ingot Production Plants	X	X	X	X
N	Iron and Steel Plants	X	X	X	X
O	Sewage Treatment Plants	X	X	X	X
P	Primary Copper Smelters	X	X	X	X
Q	Primary Zinc Smelters	X	X	X	X
R	Primary Lead Smelters	X	X	X	X
S	Primary Aluminum Reduction Plants	X	X	X	X
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	X	X	X	X
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	X	X	X	X
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	X	X	X	X
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	X	X	X	X
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate	X	X	X	X
Y	Coal Preparation Plants	X	X	X	X
Z	Ferrous Production Facilities	X	X	X	X
AA	Steel Plants: Electric Arc Furnaces	X	X	X	X
AAa	Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels in Steel Plants	X	X	X	
BB	Kraft Pulp Mills	X	X	X	
CC	Glass Manufacturing Plants	X	X	X	
DD	Grain Elevators	X	X	X	
EE	Surface Coating of Metal Furniture	X	X	X	
GG	Stationary Gas Turbines	X	X	X	
HH	Lime Plants	X	X	X	
KK	Lead Acid Battery Manufacturing Plants	X	X		
LL	Metallic Mineral Processing Plants	X	X	X	
MM	Automobile and Light-Duty Truck Surface Coating Operations	X	X		
NN	Phosphate Rock Plants	X	X		
PP	Ammonium Sulfate Manufacturing Plants	X	X		

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 574 of 672

QQ	Graphic Art Industry Publication Rotogravure Printing	X	X	X	X
RR	Pressure Sensitive Tape and Label Surface Coating Operations	X	X	X	
SS	Industrial Surface Coating: Large Appliances	X	X	X	
TT	Metal Coil Surface Coating	X	X	X	
UU	Asphalt Processing and Asphalt Roofing Manufacture	X	X	X	
VV	Equipment Leaks of Volatile Organic Compounds in Synthetic Organic Chemical Manufacturing Industry	X		X	
WW	Beverage Can Surface Coating Industry	X	X	X	
XX	Bulk Gasoline Terminals	X	X	X	
FFF	Flexible Vinyl and Urethane Coating and Printing	X	X	X	
GGG	Equipment Leaks of VOC in Petroleum Refineries	X		X	
HHH	Synthetic Fiber Production Facilities	X		X	
JJJ	Petroleum Dry Cleaners	X	X	X	
KKK	Equipment Leaks of VOC from Onshore Natural Gas Processing Plants				
LLL	Onshore Natural Gas Processing Plants; SO ₂ Emissions		X		
OOO	Nonmetallic Mineral Processing Plants		X	X	
PPP	Wool Fiberglass Insulation Manufacturing Plants		X	X	

(33) State of New Mexico: New Mexico Environment Department, P.O. Box 5469, Santa Fe, New Mexico 87502-5469. Note: For a list of delegated standards for New Mexico (excluding Bernalillo County and Indian country), see paragraph (e)(1) of this section.

(i) Albuquerque-Bernalillo County Air Quality Control Board, c/o Environmental Health Department, P.O. Box 1293, Albuquerque, New Mexico 87103.

(ii) [Reserved]

(34) New York: New York State Department of Environmental Conservation, 50 Wolf Road Albany, New York 12233, attention: Division of Air Resources.

(35) State of North Carolina: North Carolina Department of Environmental Quality, Division of Air Quality, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641 or local agencies, Forsyth County Office of Environmental Assistance and Protection, 201 North Chestnut Street, Winston-Salem, North Carolina 27101-4120; Mecklenburg County Land Use and Environmental Services Agency, Air Quality, 2145 Suttle Avenue, Charlotte, North Carolina 28208; Western North Carolina Regional Air Quality Agency, 125 S. Lexington Ave., Suite 101, Asheville, North Carolina 28801-3661.

(36) State of North Dakota, Division of Air Quality, North Dakota Department of Health, P.O. Box 5520, Bismarck, ND 58506-5520.

NOTE: For a table listing Region VIII's NSPS delegation status, see paragraph (c) of this section.

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 575 of 672

(37) State of Ohio:

(i) Medina, Summit and Portage Counties; Director, Akron Regional Air Quality Management District, 146 South High Street, Room 904, Akron, OH 44308.

(ii) Stark County; Director, Canton City Health Department, Air Pollution Control Division, 420 Market Avenue North, Canton, Ohio 44702-1544.

(iii) Butler, Clermont, Hamilton, and Warren Counties; Director, Hamilton County Department of Environmental Services, 250 William Howard Taft Road, Cincinnati, Ohio 45219-2660.

(iv) Cuyahoga County; Commissioner, Cleveland Department of Public Health, Division of Air Quality, 75 Erieview Plaza 2nd Floor, Cleveland, Ohio 44114.

(v) Clark, Darke, Greene, Miami, Montgomery, and Preble Counties; Director, Regional Air Pollution Control Agency, 117 South Main Street, Dayton, Ohio 45422-1280.

(vi) Lucas County and the City of Rossford (in Wood County); Director, City of Toledo, Division of Environmental Services, 348 South Erie Street, Toledo, OH 43604.

(vii) Adams, Brown, Lawrence, and Scioto Counties; Portsmouth Local Air Agency, 605 Washington Street, Third Floor, Portsmouth, OH 45662.

(viii) Allen, Ashland, Auglaize, Crawford, Defiance, Erie, Fulton, Hancock, Hardin, Henry, Huron, Marion, Mercer, Ottawa, Paulding, Putnam, Richland, Sandusky, Seneca, Van Wert Williams, Wood (Except City of Rossford), and Wyandot Counties; Ohio Environmental Protection Agency, Northwest District Office, Air Pollution Control, 347 North Dunbridge Road, Bowling Green, Ohio 43402.

(ix) Ashtabula, Carroll, Columbiana, Holmes, Lorain, and Wayne Counties; Ohio Environmental Protection Agency, Northeast District Office, Air Pollution Unit, 2110 East Aurora Road, Twinsburg, OH 44087.

(x) Athens, Belmont, Coshocton, Gallia, Guemsey, Harrison, Hocking, Jackson, Jefferson, Meigs, Monroe, Morgan, Muskingum, Noble, Perry, Pike, Ross, Tuscarawas, Vinton, and Washington Counties; Ohio Environmental Protection Agency, Southeast District Office, Air Pollution Unit, 2195 Front Street, Logan, OH 43138.

(xi) Champaign, Clinton, Highland, Logan, and Shelby Counties; Ohio Environmental Protection Agency, Southwest District Office, Air Pollution Unit, 401 East Fifth Street, Dayton, Ohio 45402-2911.

(xii) Delaware, Fairfield, Fayette, Franklin, Knox, Licking, Madison, Morrow, Pickaway, and Union Counties; Ohio Environmental Protection Agency, Central District Office, Air Pollution control, 50 West Town Street, Suite 700, Columbus, Ohio 43215.

(xiii) Geauga and Lake Counties; Lake County General Health District, Air Pollution Control, 33 Mill Street, Painesville, OH 44077.

(xiv) Mahoning and Trumbull Counties; Mahoning-Trumbull Air Pollution Control Agency, 345 Oak Hill Avenue, Suite 200, Youngstown, OH 44502.

(38) State of Oklahoma, Oklahoma State Department of Health, Air Quality Service, P.O. Box 53551, Oklahoma City, OK 73152.

(i) Oklahoma City and County; Director, Oklahoma City-County Health Department, 921 Northeast 23rd Street, Oklahoma City, OK 73105.

(ii) Tulsa County; Tulsa City-County Health Department, 4616 East Fifteenth Street, Tulsa, OK 74112.

(39) State of Oregon. (i) Oregon Department of Environmental Quality (ODEQ), 811 SW Sixth Avenue, Portland, OR 97204-1390, <http://www.deq.state.or.us>.

(ii) Lane Regional Air Pollution Authority (LRAPA), 1010 Main Street, Springfield, Oregon 97477, <http://www.lrapa.org>.

(40)(i) City of Philadelphia, Department of Public Health, Air Management Services, 321 University Avenue, Philadelphia, Pennsylvania 19104.

(ii) Commonwealth of Pennsylvania, Department of Environmental Protection, Bureau of Air Quality Control, P.O. Box 8468, 400 Market Street, Harrisburg, Pennsylvania 17105.

(iii) Allegheny County Health Department, Bureau of Environmental Quality, Division of Air Quality, 301 39th Street, Pittsburgh, Pennsylvania 15201.

(41) State of Rhode Island, Division of Air and Hazardous Materials, Department of Environmental Management, 291 Promenade Street, Providence, RI 02908.

(42) State of South Carolina: South Carolina Department of Health and Environmental Control, 2600 Bull Street, Columbia, South Carolina 29201.

(43) State of South Dakota, Air Quality Program, Department of Environment and Natural Resources, Joe Foss Building, 523 East Capitol, Pierre, SD 57501-3181.

NOTE: For a table listing Region VIII's NSPS delegation status, see paragraph (c) of this section.

(44) State of Tennessee: Tennessee Department of Environment and Conservation, Division of Air Pollution Control, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 15th Floor, Nashville, Tennessee 37243, or local agencies, Knox County Air Quality Management—Department of Public Health, 140 Dameron Avenue, Knoxville, Tennessee 37917; Metro Public Health Department, Pollution Control Division, 2500 Charlotte Ave., Nashville, Tennessee 37209; Chattanooga-Hamilton County Air Pollution Control Bureau, 6125 Preservation Drive, Chattanooga, Tennessee 37416; Shelby County Health Department, Pollution Control Section, 814 Jefferson Avenue, Memphis, Tennessee 38105.

(45) State of Texas, Texas Air Control Board, 6330 Highway 290 East, Austin, TX 78723.

(46) State of Utah, Division of Air Quality, Department of Environmental Quality, P.O. Box 144820, Salt Lake City, UT 84114-4820.

NOTE: For a table listing Region VIII's NSPS delegation status, see paragraph (c) of this section.

(47) State of Vermont, Air Pollution Control Division, Agency of Natural Resources, Building 3 South, 103 South Main Street, Waterbury, VT 05676.

(48) Commonwealth of Virginia, Department of Environmental Quality, 629 East Main Street, Richmond, Virginia 23219.

(49) *State of Washington.*

(i) Washington State Department of Ecology (Ecology), P.O. Box 47600, Olympia, WA 98504-7600, <http://www.ecy.wa.gov/>

(ii) Benton Clean Air Authority (BCAA), 650 George Washington Way, Richland, WA 99352-4289, <http://www.bcaa.net/>

(iii) Northwest Air Pollution Control Authority (NWAPA), 1600 South Second St., Mount Vernon, WA 98273-5202, <http://www.nwair.org/>

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 578 of 672

Db Industrial-Commercial-Institutional Steam Generating Units	X	X	X	X	X	X	X	X
Dc Small Industrial-Commercial-Institutional Steam Generating Units	X	X	X	X	X	X	X	X
E Incinerators	X	X	X	X	X	X	X	X
Ea Municipal Waste Combustors for which Construction is Commenced after December 20, 1989 and on or before September 20, 1994	X	X	X	X	X	X	X	X
Eb—Large Municipal Waste Combustors		X		X	X	X		
Ec—Hospital/Medical/Infectious Waste Incinerators	X	X	X	X	X	X		
F Portland Cement Plants	X	X	X	X	X	X	X	X
G Nitric Acid Plants	X	X	X	X	X	X	X	X
H Sulfuric Acid Plants	X	X	X	X	X	X	X	X
I Hot Mix Asphalt Facilities	X	X	X	X	X	X	X	X
J Petroleum Refineries	X	X	X	X	X	X	X	X
K Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced after June 11, 1973 and prior to May 19, 1978	X	X	X	X	X	X	X	X
Ka Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced after May 18, 1978 and prior to July 23, 1984	X	X	X	X	X	X	X	X
Kb VOC Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984	X	X	X	X	X	X	X	X
L Secondary Lead Smelters	X	X	X	X	X	X	X	X
M Secondary Brass and Bronze Production Plants	X	X	X	X	X	X	X	X
N Primary Emissions from Basic Oxygen Process Furnaces for which Construction is Commenced after June 11, 1973	X	X	X	X	X	X	X	X
Na Secondary Emissions from Basic Oxygen Process Steel-making Facilities for which Construction is Commenced after January 20, 1983	X	X	X	X	X	X	X	X
O Sewage Treatment Plants	X	X	X	X	X	X	X	X
P Primary Copper Smelters	X	X	X	X	X	X	X	X
Q Primary Zinc Smelters	X	X	X	X	X	X	X	X
R Primary Lead Smelters	X	X	X	X	X	X	X	X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 579 of 672

S Primary Aluminum Reduction Plants ¹⁰	X							
T Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	X	X	X	X	X	X	X	X
U Phosphate Fertilizer Industry: Superphosphoric Acid Plants	X	X	X	X	X	X	X	X
V Phosphate Fertilizer Industry: Diammonium Phosphate Plants	X	X	X	X	X	X	X	X
W Phosphate Fertilizer Industry: Triple Superphosphate Plants	X	X	X	X	X	X	X	X
X Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	X	X	X	X	X	X	X	X
Y Coal Preparation Plants	X	X	X	X	X	X	X	X
Z Ferroalloy Production Facilities	X	X	X	X	X	X	X	X
AA Steel Plants: Electric Arc Furnaces Constructed after October 21, 1974 and on or before August 17, 1983	X	X	X	X	X	X	X	X
AAa Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed after August 7, 1983	X	X	X	X	X	X	X	X
BB Kraft Pulp Mills ¹¹	X							
CC Glass Manufacturing Plants	X	X	X	X	X	X	X	X
DD Grain Elevators	X	X	X	X	X	X	X	X
EE Surface Coating of Metal Furniture	X	X	X	X	X	X	X	X
GG Stationary Gas Turbines	X	X	X	X	X	X	X	X
HH Lime Manufacturing Plants	X	X	X	X	X	X	X	X
KK Lead-Acid Battery Manufacturing Plants	X	X	X	X	X	X	X	X
LL Metallic Mineral Processing Plants	X	X	X	X	X	X	X	X
MM Automobile and Light Duty Truck Surface Coating Operations	X	X	X	X	X	X	X	X
NN Phosphate Rock Plants	X	X	X	X	X	X	X	X
PP Ammonium Sulfate Manufacture	X	X	X	X	X	X	X	X
QQ Graphic Arts Industry: Publication Rotogravure Printing	X	X	X	X	X	X	X	X
RR Pressure Sensitive Tape and Label Surface Coating Standards	X	X	X	X	X	X	X	X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 580 of 672

SS Industrial Surface Coating: Large Appliances	X	X	X	X	X	X	X	X
TT Metal Coil Surface Coating	X	X	X	X	X	X	X	X
UU Asphalt Processing and Asphalt Roof Manufacture	X	X	X	X	X	X	X	X
VV Equipment Leaks of VOC in Synthetic Organic Chemical Manufacturing Industry	X	X	X	X	X	X	X	X
WW Beverage Can Surface Coating Industry	X	X	X	X	X	X	X	X
XX Bulk Gasoline Terminals	X	X	X	X	X	X	X	X
AAA New Residential Wood Heaters								
BBB Rubber Tire Manufacturing Industry	X	X	X	X	X	X	X	X
DDD VOC Emissions from Polymer Manufacturing Industry	X	X	X	X	X	X	X	X
FFF Flexible Vinyl and Urethane Coating and Printing	X	X	X	X	X	X	X	X
GGG Equipment Leaks of VOC in Petroleum Refineries	X	X	X	X	X	X	X	X
HHH Synthetic Fiber Production Facilities	X	X	X	X	X	X	X	X
III VOC Emissions from Synthetic Organic Chemical Manufacturing Industry Air Oxidation Unit Processes	X	X	X	X	X	X	X	X
JJJ Petroleum Dry Cleaners	X	X	X	X	X	X	X	X
KKK Equipment Leaks of VOC from Onshore Natural Gas Processing Plants	X	X	X	X	X	X	X	X
LLL Onshore Natural Gas Processing: SO ₂ Emissions	X	X	X	X	X	X	X	X
NNN VOC Emissions from Synthetic Organic Chemical Manufacturing Industry Distillation Operations	X	X	X	X	X	X	X	X
OOO Nonmetallic Mineral Processing Plants			X		X		X	
PPP Wool Fiberglass Insulation Manufacturing Plants	X	X	X	X	X	X	X	X
QQQ VOC Emissions from Petroleum Refinery Wastewater Systems	X	X	X	X	X	X	X	X
RRR VOCs from Synthetic Organic Chemical Manufacturing Industry Reactor Processes	X	X	X	X	X	X	X	X
SSS Magnetic Tape Coating Facilities	X	X	X	X	X	X	X	X
TTT Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	X	X	X	X	X	X	X	X
UUU Calciners and Dryers in Mineral Industries	X	X	X	X	X	X	X	X
VVV Polymeric Coating of Supporting Substrates Facilities	X	X	X	X	X	X	X	X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 581 of 672

WWW Municipal Solid Waste Landfills	X	X	X	X	X	X	X	X
AAAA Small Municipal Waste Combustion Units for which Construction is Commenced after August 30, 1999 or for which Modification or Reconstruction is Commenced after June 6, 2001	X	X		X	X	X		X
BBBB Small Municipal Waste Combustion Units Constructed on or before August 30, 1999 (Emission Guidelines and Compliance Times)								
CCCC Commercial and Industrial Solid Waste Incineration Units for which Construction is Commenced after November, 30, 1999 or for which Modification or Reconstruction is Commenced on or after June 1, 2001	X	X		X	X	X		X
DDDD Commercial and Industrial Solid Waste Incineration Units that Commenced Construction on or before November 30, 1999 (Emission Guidelines and Compliance Times)								

¹Any authority within any subpart of this part that is not delegable, is not delegated. Please refer to Attachment B to the delegation letters for a listing of the NSPS authorities excluded from delegation.

²Washington State Department of Ecology, for 40 CFR 60.17(h)(1), (h)(2), (h)(3) and 40 CFR part 60, subpart AAAA, as in effect on June 6, 2001; for 40 CFR part 60, subpart CCCC, as in effect on June 1, 2001; and for all other NSPS delegated, as in effect February 20, 2001.

³Benton Clean Air Authority, for 40 CFR 60.17(h)(1), (h)(2), (h)(3) and 40 CFR part 60, subpart AAAA, as in effect on June 6, 2001; for 40 CFR part 60, subpart CCCC, as in effect on June 1, 2001; and for all other NSPS delegated, as in effect February 20, 2001.

⁴Northwest Air Pollution Authority, for all NSPS delegated, as in effect on July 1, 2000.

⁵Olympic Regional Clean Air Authority, for 40 CFR 60.17(h)(1), (h)(2), (h)(3) and 40 CFR part 60, subpart AAAA, as in effect on June 6, 2001; for 40 CFR part 60, subpart CCCC, as in effect on June 1, 2001; and for all other NSPS delegated, as in effect February 20, 2001.

⁶Puget Sound Clean Air Authority, for all NSPS delegated, as in effect on July 1, 2002.

⁷Spokane County Air Pollution Control Authority, for 40 CFR 60.17(h)(1), (h)(2), (h)(3) and 40 CFR part 60, subpart AAAA, as in effect on June 6, 2001; for 40 CFR part 60, subpart CCCC, as in effect on June 1, 2001; and for all other NSPS delegated, as in effect February 20, 2001.

⁸Southwest Clean Air Agency, for all NSPS delegated, as in effect on July 1, 2000.

⁹Yakima Regional Clean Air Authority, for 40 CFR 60.17(h)(1), (h)(2), (h)(3) and 40 CFR part 60, subpart AAAA, as in effect on June 6, 2001; for 40 CFR part 60, subpart CCCC, as in effect on June 1, 2001; and for all other NSPS delegated, as in effect February 20, 2001.

¹⁰Subpart S of this part is not delegated to local agencies in Washington because the Washington State Department of Ecology retains sole authority to regulate Primary Aluminum Plants, pursuant to Washington Administrative Code 173-415-010.

¹¹Subpart BB of this part is not delegated to local agencies in Washington because the Washington State Department of Ecology retains sole authority to regulate Kraft and Sulfite Pulp Milling, pursuant to Washington State Administrative Code 173-405-012 and 173-410-012.

(50) State of West Virginia, Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE., Charleston, West Virginia 25304.

(51) State of Wisconsin: Wisconsin Department of Natural Resources, 101 South Webster St., P.O. Box 7921, Madison, Wisconsin 53707-7921.

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 582 of 672

(52) State of Wyoming, Department of Environmental Quality, Air Quality Division, Herschler Building, 122 West 25th Street, Cheyenne, WY 82002.

NOTE: For a table listing Region VIII's NSPS delegation status, see paragraph (c) of this section.

(53) Territory of Guam: Guam Environmental Protection Agency, P.O. Box 22439 GMF, Barrigada, Guam 96921.

NOTE: For tables listing the delegation status of agencies in Region IX, see paragraph (d) of this section.

(54) Commonwealth of Puerto Rico: Commonwealth of Puerto Rico Environmental Quality Board, P.O. Box 11488, Santurce, PR 00910, Attention: Air Quality Area Director (see table under §60.4(b)(FF)(1)).

(55) U.S. Virgin Islands: U.S. Virgin Islands Department of Conservation and Cultural Affairs, P.O. Box 578, Charlotte Amalie, St. Thomas, VI 00801.

(56) American Samoa: American Samoa Environmental Protection Agency, P.O. Box PPA, Pago Pago, American Samoa 96799.

NOTE: For tables listing the delegation status of agencies in Region IX, see paragraph (d) of this section.

(57) Commonwealth of the Northern Mariana Islands: CNMI Division of Environmental Quality, P.O. Box 501304, Saipan, MP 96950.

NOTE: For tables listing the delegation status of agencies in Region IX, see paragraph (d) of this section.

(c) The delegation status table for New Source Performance Standards for Region VIII can be found online at <http://www2.epa.gov/region8/air-program>.

(d) The following tables list the specific part 60 standards that have been delegated unchanged to the air pollution control agencies in Region IX. The (X) symbol is used to indicate each standard that has been delegated. The following provisions of this subpart are not delegated: §§60.4(b), 60.8(b), 60.9, 60.11(b), 60.11(e), 60.13(a), 60.13(d)(2), 60.13(g), 60.13(i).

(1) *Arizona*. The following table identifies delegations for Arizona:

Delegation Status for New Source Performance Standards for Arizona

	Subpart	Air pollution control agency			
		Arizona DEQ	Maricopa County	Pima County	Pinal County
A	General Provisions	X	X	X	X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X	X	X	X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978	X	X	X	X
Db	Industrial-Commercial-Institutional Steam Generating Units	X	X	X	X
Dc	Small Industrial-Commercial-Institutional Steam Generating Units	X	X	X	X
E	Incinerators	X	X	X	X
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994	X	X	X	X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 583 of 672

Eb	Large Municipal Waste Combustors Constructed After September 20, 1994	X	X	X	
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996	X	X	X	
F	Portland Cement Plants	X	X	X	X
G	Nitric Acid Plants	X	X	X	X
Ga	Nitric Acid Plants For Which Construction, Reconstruction or Modification Commenced After October 14, 2011		X	X	
H	Sulfuric Acid Plant	X	X	X	X
I	Hot Mix Asphalt Facilities	X	X	X	X
J	Petroleum Refineries	X	X	X	X
Ja	Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007		X	X	
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	X	X	X	X
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	X	X	X	X
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	X	X	X	X
L	Secondary Lead Smelters	X	X	X	X
M	Secondary Brass and Bronze Production Plants	X	X	X	X
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973	X	X	X	X
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983	X	X	X	X
O	Sewage Treatment Plants	X	X	X	X
P	Primary Copper Smelters	X	X	X	X
Q	Primary Zinc Smelters	X	X	X	X
R	Primary Lead Smelters	X	X	X	X
S	Primary Aluminum Reduction Plants	X	X	X	X
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	X	X	X	X
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	X	X	X	X
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	X	X	X	X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 584 of 672

W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	X	X	X	X
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	X	X	X	X
Y	Coal Preparation and Processing Plants	X	X	X	X
Z	Ferroalloy Production Facilities	X	X	X	X
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983	X	X	X	X
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983	X	X	X	X
BB	Kraft Pulp Mills	X	X	X	X
BBa	Kraft Pulp Mill Sources for which Construction, Reconstruction or Modification Commenced after May 23, 2013		X	X	
CC	Glass Manufacturing Plants	X	X	X	X
DD	Grain Elevators	X	X	X	X
EE	Surface Coating of Metal Furniture	X	X	X	X
FF	(Reserved)				
Ga	Nitric Acid Plants for which Construction, Reconstruction or Modification Commenced after October 14, 2011		X		
GG	Stationary Gas Turbines	X	X	X	X
HH	Lime Manufacturing Plants	X	X	X	X
KK	Lead-Acid Battery Manufacturing Plants	X	X	X	X
LL	Metallic Mineral Processing Plants	X	X	X	X
MM	Automobile and Light Duty Trucks Surface Coating Operations	X	X	X	X
NN	Phosphate Rock Plants	X	X	X	X
PP	Ammonium Sulfate Manufacture	X	X	X	X
QQ	Graphic Arts Industry: Publication Rotogravure Printing	X	X	X	X
RR	Pressure Sensitive Tape and Label Surface Coating Operations	X	X	X	X
SS	Industrial Surface Coating: Large Appliances	X	X	X	X
TT	Metal Coil Surface Coating	X	X	X	X
UU	Asphalt Processing and Asphalt Roofing Manufacture	X	X	X	X
VV	Equipment Leaks of VOC in the Synthetic Organic Industry Chemicals Manufacturing	X	X	X	X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 585 of 672

VVa	Equipment Leaks of VOC in the Synthetic Organic Industry for Which Construction, Reconstruction, or Chemicals Manufacturing Modification Commenced After November 7, 2006	X	X	X	
WW	Beverage Can Surface Coating Industry	X	X	X	X
XX	Bulk Gasoline Terminals	X	X	X	X
AAA	New Residential Wood Heaters	X	X	X	X
BBB	Rubber Tire Manufacturing Industry	X	X	X	X
CCC	(Reserved)				
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry	X	X	X	X
EEE	(Reserved)				
FFF	Flexible Vinyl and Urethane Coating and Printing	X	X	X	X
GGG	Equipment Leaks of VOC in Petroleum Refineries	X	X	X	X
GGGa	Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006	X	X	X	
HHH	Synthetic Fiber Production Facilities	X	X	X	X
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes	X	X	X	X
JJJ	Petroleum Dry Cleaners	X	X	X	X
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants	X	X	X	X
LLL	Onshore Natural Gas Processing: SO ₂ Emissions	X	X	X	X
MMM	(Reserved)				
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations	X	X	X	X
OOO	Nonmetallic Mineral Processing Plants	X	X	X	X
PPP	Wool Fiberglass Insulation Manufacturing Plants	X	X	X	X
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems	X	X	X	X
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes	X	X		
SSS	Magnetic Tape Coating Facilities	X	X	X	X
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	X	X	X	X
UUU	Calciners and Dryers in Mineral Industries	X	X	X	

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 586 of 672

VVV	Polymeric Coating of Supporting Substrates Facilities	X	X	X	X
WWW	Municipal Solid Waste Landfills	X	X	X	
AAAA	Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001	X	X	X	
CCCC	Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001	X	X	X	
EEEE	Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006	X	X	X	
GGGG	(Reserved)				
HHHH	(Reserved)				
IIII	Stationary Compression Ignition Internal Combustion Engines	X	X	X	
JJJJ	Stationary Spark Ignition Internal Combustion Engines		X	X	
KKKK	Stationary Combustion Turbines	X	X	X	
LLLL	New Sewage Sludge Incineration Units			X	
MMMM	Emissions Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units	X			
OOOO	Crude Oil and Natural Gas Production, Transmission, and Distribution		X	X	
QQQQ	Standards of Performance for New Residential Hydronic Heaters and Forced-Air Furnaces		X	X	
TTTT	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units		X		

(2) *California*. The following tables identify delegations for each of the local air pollution control agencies of California.

(i) Delegations for Amador County Air Pollution Control District, Antelope Valley Air Quality Management District, Bay Area Air Quality Management District, and Butte County Air Quality Management District are shown in the following table:

Delegation Status for New Source Performance Standards for Amador County APCD, Antelope Valley AQMD, Bay Area AQMD, and Butte County AQMD

Subpart	Air pollution control agency			
	Amador County APCD	Antelope Valley AQMD	Bay Area AQMD	Butte County AQMD

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 587 of 672

A	General Provisions		X		
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971		X	X	
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978		X	X	
Db	Industrial-Commercial-Institutional Steam Generating Units		X	X	
Dc	Small Industrial-Commercial-Institutional Steam Generating Units		X	X	
E	Incinerators		X	X	
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994		X	X	
Eb	Large Municipal Waste Combustors Constructed After September 20, 1994		X		
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996		X		
F	Portland Cement Plants		X	X	
G	Nitric Acid Plants		X	X	
Ga	Nitric Acid Plants For Which Construction, Reconstruction or Modification Commenced After October 14, 2011				
H	Sulfuric Acid Plant		X	X	
I	Hot Mix Asphalt Facilities		X	X	
J	Petroleum Refineries		X	X	
Ja	Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007		X		
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978		X	X	
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984		X	X	
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984		X	X	
L	Secondary Lead Smelters		X	X	
M	Secondary Brass and Bronze Production Plants		X	X	
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973		X	X	
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983		X	X	

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 588 of 672

O	Sewage Treatment Plants		X	X	
P	Primary Copper Smelters		X	X	
Q	Primary Zinc Smelters		X	X	
R	Primary Lead Smelters		X	X	
S	Primary Aluminum Reduction Plants		X	X	
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants		X		
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants		X	X	
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants		X	X	
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants		X	X	
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities		X	X	
Y	Coal Preparation and Processing Plants		X	X	
Z	Ferroalloy Production Facilities		X	X	
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983		X	X	
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983		X	X	
BB	Kraft Pulp Mills		X	X	
CC	Glass Manufacturing Plants		X	X	
DD	Grain Elevators		X	X	
EE	Surface Coating of Metal Furniture		X	X	
FF	(Reserved)				
GG	Stationary Gas Turbines		X	X	
HH	Lime Manufacturing Plants		X	X	
KK	Lead-Acid Battery Manufacturing Plants		X	X	
LL	Metallic Mineral Processing Plants		X	X	
MM	Automobile and Light Duty Trucks Surface Coating Operations		X	X	
NN	Phosphate Rock Plants		X	X	
PP	Ammonium Sulfate Manufacture		X	X	
QQ	Graphic Arts Industry: Publication Rotogravure Printing		X	X	

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 589 of 672

RR	Pressure Sensitive Tape and Label Surface Coating Operations		X	X	
SS	Industrial Surface Coating: Large Appliances		X	X	
TT	Metal Coil Surface Coating		X	X	
UU	Asphalt Processing and Asphalt Roofing Manufacture		X	X	
VV	Equipment Leaks of VOC in the Synthetic Organic Industry Chemicals Manufacturing		X	X	
VVa	Equipment Leaks of VOC in the Synthetic Organic Industry for Which Construction, Reconstruction, or Chemicals Manufacturing Modification Commenced After November 7, 2006		X		
WW	Beverage Can Surface Coating Industry		X	X	
XX	Bulk Gasoline Terminals				
AAA	New Residential Wood Heaters		X	X	
BBB	Rubber Tire Manufacturing Industry		X	X	
CCC	(Reserved)				
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry		X	X	
EEE	(Reserved)				
FFF	Flexible Vinyl and Urethane Coating and Printing		X	X	
GGG	Equipment Leaks of VOC in Petroleum Refineries		X	X	
GGGa	Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006		X		
HHH	Synthetic Fiber Production Facilities		X	X	
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes		X		
JJJ	Petroleum Dry Cleaners		X	X	
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants		X	X	
LLL	Onshore Natural Gas Processing: SO ₂ Emissions		X		
MMM	(Reserved)				
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations		X	X	
OOO	Nonmetallic Mineral Processing Plants		X	X	
PPP	Wool Fiberglass Insulation Manufacturing Plants		X	X	

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 590 of 672

QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems		X		
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes		X		
SSS	Magnetic Tape Coating Facilities		X	X	
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines		X	X	
UUU	Calciners and Dryers in Mineral Industries		X	X	
VVV	Polymeric Coating of Supporting Substrates Facilities		X	X	
WWW	Municipal Solid Waste Landfills		X		
AAAA	Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001		X		
CCCC	Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001		X		
EEEE	Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006		X		
GGGG	(Reserved)				
HHHH	(Reserved)				
IIII	Stationary Compression Ignition Internal Combustion Engines		X		
JJJJ	Stationary Spark Ignition Internal Combustion Engines		X		
KKKK	Stationary Combustion Turbines		X		
LLLL	New Sewage Sludge Incineration Units				
OOOO	Crude Oil and Natural Gas Production, Transmission, and Distribution				

(ii) [Reserved]

(iii) Delegations for Glenn County Air Pollution Control District, Great Basin Unified Air Pollution Control District, Imperial County Air Pollution Control District, and Kern County Air Pollution Control District are shown in the following table:

Delegation Status for New Source Performance Standards for Glenn County APCD, Great Basin Unified APCD, Imperial County APCD, and Kern County APCD

	Subpart	Air pollution control agency
--	---------	------------------------------

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 591 of 672

		Glenn County APCD	Great Basin Unified APCD	Imperial County APCD	Kern County APCD
A	General Provisions		X		X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971		X		X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978		X		X
Db	Industrial-Commercial-Institutional Steam Generating Units		X		X
Dc	Small Industrial Steam Generating Units		X		X
E	Incinerators		X		X
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994		X		
Eb	Municipal Waste Combustors Constructed After September 20, 1994				
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996				
F	Portland Cement Plants		X		X
G	Nitric Acid Plants		X		X
H	Sulfuric Acid Plants		X		
I	Hot Mix Asphalt Facilities		X		X
J	Petroleum Refineries		X		X
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978		X		X
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984		X		X
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984		X		X
L	Secondary Lead Smelters		X		X
M	Secondary Brass and Bronze Production Plants		X		X
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973		X		X
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983		X		X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 592 of 672

O	Sewage Treatment Plants		X		X
P	Primary Copper Smelters		X		X
Q	Primary Zinc Smelters		X		X
R	Primary Lead Smelters		X		X
S	Primary Aluminum Reduction Plants		X		X
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants		X		X
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants		X		X
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants		X		X
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants		X		X
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities		X		X
Y	Coal Preparation Plants		X		X
Z	Ferroalloy Production Facilities		X		X
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983		X		X
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983		X		X
BB	Kraft pulp Mills		X		X
CC	Glass Manufacturing Plants		X		X
DD	Grain Elevators		X		X
EE	Surface Coating of Metal Furniture		X		X
FF	(Reserved)				
GG	Stationary Gas Turbines		X		X
HH	Lime Manufacturing Plants		X		X
KK	Lead-Acid Battery Manufacturing Plants		X		X
LL	Metallic Mineral Processing Plants		X		X
MM	Automobile and Light Duty Trucks Surface Coating Operations		X		X
NN	Phosphate Rock Plants		X		X
PP	Ammonium Sulfate Manufacture		X		X
QQ	Graphic Arts Industry: Publication Rotogravure Printing		X		X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 593 of 672

RR	Pressure Sensitive Tape and Label Surface Coating Operations		X		X
SS	Industrial Surface Coating: Large Appliances		X		X
TT	Metal Coil Surface Coating		X		X
UU	Asphalt Processing and Asphalt Roofing Manufacture		X		X
VV	Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry		X		X
WW	Beverage Can Surface Coating Industry		X		X
XX	Bulk Gasoline Terminals				
AAA	New Residential Wool Heaters		X		X
BBB	Rubber Tire Manufacturing Industry		X		X
CCC	(Reserved)				
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry		X		X
EEE	(Reserved)				
FFF	Flexible Vinyl and Urethane Coating and Printing		X		X
GGG	Equipment Leaks of VOC in Petroleum Refineries		X		X
HHH	Synthetic Fiber Production Facilities		X		X
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes		X		X
JJJ	Petroleum Dry Cleaners		X		X
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants		X		X
LLL	Onshore Natural Gas Processing: SO2 Emissions				X
MMM	(Reserved)				
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations		X		X
OOO	Nonmetallic Mineral Processing Plants		X		X
PPP	Wool Fiberglass Insulation Manufacturing Plants		X		X
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems		X		X
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes				X
SSS	Magnetic Tape Coating Facilities		X		X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 594 of 672

TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines		X	X	
UUU	Calciners and Dryers in Mineral Industries		X		X
VVV	Polymeric Coating of Supporting Substrates Facilities		X		X
WWW	Municipal Solid Waste Landfills				X

(iv) Delegations for Lake County Air Quality Management District, Lassen County Air Pollution Control District, Mariposa County Air Pollution Control District, and Mendocino County Air Pollution Control District are shown in the following table:

Delegation Status for New Source Performance Standards for Lake County Air Quality Management District, Lassen County Air Pollution Control District, Mariposa County Air Pollution Control District, and Mendocino County Air Pollution Control District

	Subpart	Air pollution control agency			
		Lake County AQMD	Lassen County APCD	Mariposa County AQMD	Mendocino County AQMD
A	General Provisions	X			X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X			X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978	X			X
Db	Industrial-Commercial-Institutional Steam Generating Units	X			
Dc	Small Industrial Steam Generating Units	X			X
E	Incinerators	X			X
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994	X			X
Eb	Municipal Waste Combustors Constructed After September 20, 1994				
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996				
F	Portland Cement Plants	X			X
G	Nitric Acid Plants	X			X
H	Sulfuric Acid Plants	X			X
I	Hot Mix Asphalt Facilities	X			X

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 595 of 672

J	Petroleum Refineries	X		X
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	X		X
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	X		X
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	X		X
L	Secondary Lead Smelters	X		X
M	Secondary Brass and Bronze Production Plants	X		X
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973	X		X
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983	X		X
O	Sewage Treatment Plants	X		X
P	Primary Copper Smelters	X		X
Q	Primary Zinc Smelters	X		X
R	Primary Lead Smelters	X		X
S	Primary Aluminum Reduction Plants	X		X
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	X		X
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	X		X
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	X		X
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	X		X
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	X		X
Y	Coal Preparation Plants	X		X
Z	Ferroalloy Production Facilities	X		X
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983	X		X
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983	X		X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 596 of 672

BB	Kraft Pulp Mills	X		X
CC	Glass Manufacturing Plants	X		X
DD	Grain Elevators	X		X
EE	Surface Coating of Metal Furniture	X		X
FF	(Reserved)			
GG	Stationary Gas Turbines	X		X
HH	Lime Manufacturing Plants	X		X
KK	Lead-Acid Battery Manufacturing Plants	X		X
LL	Metallic Mineral Processing Plants	X		X
MM	Automobile and Light Duty Trucks Surface Coating Operations	X		X
NN	Phosphate Rock Plants	X		X
PP	Ammonium Sulfate Manufacture	X		X
QQ	Graphic Arts Industry: Publication Rotogravure Printing	X		X
RR	Pressure Sensitive Tape and Label Surface Coating Operations	X		X
SS	Industrial Surface Coating: Large Appliances	X		X
TT	Metal Coil Surface Coating	X		X
UU	Asphalt Processing and Asphalt Roofing Manufacture	X		X
VV	Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry	X		X
WW	Beverage Can Surface Coating Industry	X		X
XX	Bulk Gasoline Terminals			
AAA	New Residential Wool Heaters	X		X
BBB	Rubber Tire Manufacturing Industry	X		X
CCC	(Reserved)			
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry	X		X
EEE	(Reserved)			
FFF	Flexible Vinyl and Urethane Coating and Printing	X		X
GGG	Equipment Leaks of VOC in Petroleum Refineries	X		X
HHH	Synthetic Fiber Production Facilities	X		X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 597 of 672

III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes	X			X
JJJ	Petroleum Dry Cleaners	X			X
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants	X			X
LLL	Onshore Natural Gas Processing: SO2 Emissions	X			X
MMM	(Reserved)				
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations	X			X
OOO	Nonmetallic Mineral Processing Plants	X			X
PPP	Wool Fiberglass Insulation Manufacturing Plants	X			X
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems	X			X
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes	X			
SSS	Magnetic Tape Coating Facilities	X			X
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines				
UUU	Calciners and Dryers in Mineral Industries	X			X
VVV	Polymeric Coating of Supporting Substrates Facilities	X			X
WWW	Municipal Solid Waste Landfills	X			

(v) Delegations for Modoc Air Pollution Control District, Mojave Desert Air Quality Management District, Monterey Bay Unified Air Pollution Control District and North Coast Unified Air Quality Management District are shown in the following table:

Delegation Status for New Source Performance Standards for Modoc County APCD, Mojave Desert AQMD, Monterey Bay Unified APCD, and North Coast Unified AQMD

	Subpart	Air pollution control agency			
		Modoc County APCD	Mojave Desert AQMD	Monterey Bay Unified APCD	North Coast Unified AQMD
A	General Provisions	X	X	X	X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X	X	X	X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 598 of 672

Da	Electric Utility Steam Generating Units Constructed After September 18, 1978	X	X	X	X
Db	Industrial-Commercial-Institutional Steam Generating Units	X	X	X	X
Dc	Small Industrial-Commercial-Institutional Steam Generating Units		X	X	
E	Incinerators	X	X	X	X
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994		X		
Eb	Large Municipal Waste Combustors Constructed After September 20, 1994		X		
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996		X		
F	Portland Cement Plants	X	X	X	X
G	Nitric Acid Plants	X	X	X	X
Ga	Nitric Acid Plants For Which Construction, Reconstruction or Modification Commenced After October 14, 2011				
H	Sulfuric Acid Plant	X	X	X	X
I	Hot Mix Asphalt Facilities	X	X	X	X
J	Petroleum Refineries	X	X	X	X
Ja	Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007		X		
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	X	X	X	X
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	X	X	X	X
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	X	X	X	X
L	Secondary Lead Smelters	X	X	X	X
M	Secondary Brass and Bronze Production Plants	X	X	X	X
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973	X	X	X	X
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983	X	X	X	X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 599 of 672

O	Sewage Treatment Plants	X	X	X	X
P	Primary Copper Smelters	X	X	X	X
Q	Primary Zinc Smelters	X	X	X	X
R	Primary Lead Smelters	X	X	X	X
S	Primary Aluminum Reduction Plants	X	X	X	X
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	X	X	X	X
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	X	X	X	X
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	X	X	X	X
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	X	X	X	X
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	X	X	X	X
Y	Coal Preparation and Processing Plants	X	X	X	X
Z	Ferroalloy Production Facilities	X	X	X	X
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983	X	X	X	X
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983	X	X	X	X
BB	Kraft Pulp Mills	X	X	X	X
CC	Glass Manufacturing Plants	X	X	X	X
DD	Grain Elevators	X	X	X	X
EE	Surface Coating of Metal Furniture	X	X	X	X
FF	(Reserved)				
GG	Stationary Gas Turbines	X	X	X	X
HH	Lime Manufacturing Plants	X	X	X	X
KK	Lead-Acid Battery Manufacturing Plants	X	X	X	X
LL	Metallic Mineral Processing Plants	X	X	X	X
MM	Automobile and Light Duty Trucks Surface Coating Operations	X	X	X	X
NN	Phosphate Rock Plants	X	X	X	X
PP	Ammonium Sulfate Manufacture	X	X	X	X
QQ	Graphic Arts Industry: Publication Rotogravure Printing	X	X	X	X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 600 of 672

RR	Pressure Sensitive Tape and Label Surface Coating Operations	X	X	X	X
SS	Industrial Surface Coating: Large Appliances	X	X	X	X
TT	Metal Coil Surface Coating	X	X	X	X
UU	Asphalt Processing and Asphalt Roofing Manufacture	X	X	X	X
VV	Equipment Leaks of VOC in the Synthetic Organic Industry Chemicals Manufacturing	X	X	X	X
VVa	Equipment Leaks of VOC in the Synthetic Organic Industry for Which Construction, Reconstruction, or Chemicals Manufacturing Modification Commenced After November 7, 2006		X		
WW	Beverage Can Surface Coating Industry	X	X	X	X
XX	Bulk Gasoline Terminals				
AAA	New Residential Wood Heaters	X	X	X	X
BBB	Rubber Tire Manufacturing Industry	X	X	X	X
CCC	(Reserved)				
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry	X	X	X	
EEE	(Reserved)				
FFF	Flexible Vinyl and Urethane Coating and Printing	X	X	X	X
GGG	Equipment Leaks of VOC in Petroleum Refineries	X	X	X	X
GGGa	Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006		X		
HHH	Synthetic Fiber Production Facilities	X	X	X	X
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes		X		
JJJ	Petroleum Dry Cleaners	X	X	X	X
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants	X	X	X	X
LLL	Onshore Natural Gas Processing: SO ₂ Emissions	X	X	X	X
MMM	(Reserved)				
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations	X	X	X	
OOO	Nonmetallic Mineral Processing Plants	X	X	X	X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 601 of 672

PPP	Wool Fiberglass Insulation Manufacturing Plants	X	X	X	X
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems	X	X	X	X
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes		X		
SSS	Magnetic Tape Coating Facilities	X	X	X	X
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	X	X	X	X
UUU	Calciners and Dryers in Mineral Industries		X	X	
VVV	Polymeric Coating of Supporting Substrates Facilities		X	X	X
WWW	Municipal Solid Waste Landfills		X		
AAAA	Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001		X		
CCCC	Commercial and Industrial Solid Waste Incineration Units for Which Construction is Commenced After November 30, 1999 or for Which Modification or Reconstruction is Commenced on or After June 1, 2001		X		
EEEE	Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006		X		
GGGG	(Reserved)				
HHHH	(Reserved)				
IIII	Stationary Compression Ignition Internal Combustion Engines		X		
JJJJ	Stationary Spark Ignition Internal Combustion Engines		X		
KKKK	Stationary Combustion Turbines		X		
LLLL	New Sewage Sludge Incineration Units				
OOOO	Crude Oil and Natural Gas Production, Transmission, and Distribution				

(vi) Delegations for Northern Sierra Air Quality Management District, Northern Sonoma County Air Pollution Control District, Placer County Air Pollution Control District, and Sacramento Metropolitan Air Quality Management District are shown in the following table:

Delegation Status for New Source Performance Standards for Northern Sierra Air Quality Management District, Northern Sonoma County Air Pollution Control District, Placer County Air Pollution Control District, and Sacramento Metropolitan Air Quality Management District

	Subpart	Air pollution control agency
--	---------	------------------------------

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 602 of 672

		Northern Sierra AQMD	Northern Sonoma County APCD	Placer County APCD	Sacramento Metropolitan AQMD
A	General Provisions		X		X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971		X		X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978		X		X
Db	Industrial-Commercial-Institutional Steam Generating Units				X
Dc	Small Industrial Steam Generating Units				X
E	Incinerators		X		X
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994				X
Eb	Municipal Waste Combustors Constructed After September 20, 1994				X
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996				X
F	Portland Cement Plants		X		X
G	Nitric Acid Plants		X		X
H	Sulfuric Acid Plants		X		X
I	Hot Mix Asphalt Facilities		X		X
J	Petroleum Refineries		X		X
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978		X		X
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984		X		X
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984				X
L	Secondary Lead Smelters		X		X
M	Secondary Brass and Bronze Production Plants		X		X
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973		X		X

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 603 of 672

Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983				X
O	Sewage Treatment Plants		X		X
P	Primary Copper Smelters		X		X
Q	Primary Zinc Smelters		X		X
R	Primary Lead Smelters		X		X
S	Primary Aluminum Reduction Plants		X		X
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants		X		X
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants		X		X
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants		X		X
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants		X		X
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities		X		X
Y	Coal Preparation Plants		X		X
Z	Ferroalloy Production Facilities		X		X
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983		X		X
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983				X
BB	Kraft pulp Mills		X		X
CC	Glass Manufacturing Plants		X		X
DD	Grain Elevators		X		X
EE	Surface Coating of Metal Furniture				X
FF	(Reserved)				
GG	Stationary Gas Turbines		X		X
HH	Lime Manufacturing Plants		X		X
KK	Lead-Acid Battery Manufacturing Plants				X
LL	Metallic Mineral Processing Plants				X
MM	Automobile and Light Duty Trucks Surface Coating Operations		X		X
NN	Phosphate Rock Plants				X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 604 of 672

PP	Ammonium Sulfate Manufacture		X		X
QQ	Graphic Arts Industry: Publication Rotogravure Printing				X
RR	Pressure Sensitive Tape and Label Surface Coating Operations				X
SS	Industrial Surface Coating: Large Appliances				X
TT	Metal Coil Surface Coating				X
UU	Asphalt Processing and Asphalt Roofing Manufacture				X
VV	Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry				X
WW	Beverage Can Surface Coating Industry				X
XX	Bulk Gasoline Terminals				
AAA	New Residential Wool Heaters				X
BBB	Rubber Tire Manufacturing Industry				X
CCC	(Reserved)				
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry				X
EEE	(Reserved)				
FFF	Flexible Vinyl and Urethane Coating and Printing				X
GGG	Equipment Leaks of VOC in Petroleum Refineries				X
HHH	Synthetic Fiber Production Facilities				X
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes				X
JJJ	Petroleum Dry Cleaners				X
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants				X
LLL	Onshore Natural Gas Processing: SO2 Emissions				X
MMM	(Reserved)				
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations				X
OOO	Nonmetallic Mineral Processing Plants				X
PPP	Wool Fiberglass Insulation Manufacturing Plants				X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 605 of 672

QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems				X
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes				X
SSS	Magnetic Tape Coating Facilities				X
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines				X
UUU	Calciners and Dryers in Mineral Industries				X
VVV	Polymeric Coating of Supporting Substrates Facilities				X
WWW	Municipal Solid Waste Landfills				X

(vii) Delegations for San Diego County Air Pollution Control District, San Joaquin Valley Unified Air Pollution Control District, San Luis Obispo County Air Pollution Control District, and Santa Barbara County Air Pollution Control District are shown in the following table:

Delegation Status for New Source Performance Standards for San Diego County APCD, San Joaquin Valley Unified APCD, San Luis Obispo County APCD, and Santa Barbara County APCD

	Subpart	Air pollution control agency			
		San Diego County APCD	San Joaquin Valley Unified APCD	San Luis Obispo County APCD	Santa Barbara County APCD
A	General Provisions	X	X	X	X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X	X	X	X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978	X	X	X	X
Db	Industrial-Commercial-Institutional Steam Generating Units	X	X	X	X
Dc	Small Industrial-Commercial-Institutional Steam Generating Units	X	X	X	X
E	Incinerators	X	X	X	X
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994	X	X	X	
Eb	Large Municipal Waste Combustors Constructed After September 20, 1994	X	X		X
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996	X			X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 606 of 672

F	Portland Cement Plants	X	X	X	
G	Nitric Acid Plants	X	X	X	
Ga	Nitric Acid Plants For Which Construction, Reconstruction or Modification Commenced After October 14, 2011				
H	Sulfuric Acid Plant	X	X	X	
I	Hot Mix Asphalt Facilities	X	X	X	X
J	Petroleum Refineries	X	X	X	X
Ja	Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007				X
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	X	X	X	X
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	X	X	X	X
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	X	X	X	X
L	Secondary Lead Smelters	X	X	X	X
M	Secondary Brass and Bronze Production Plants	X	X	X	X
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973	X	X	X	
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983	X	X	X	
O	Sewage Treatment Plants	X	X	X	X
P	Primary Copper Smelters	X	X	X	
Q	Primary Zinc Smelters	X	X	X	
R	Primary Lead Smelters	X	X	X	
S	Primary Aluminum Reduction Plants	X	X	X	
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	X	X	X	
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	X	X	X	
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	X	X	X	
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	X	X	X	

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 607 of 672

X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	X	X	X	
Y	Coal Preparation and Processing Plants	X	X	X	
Z	Ferroalloy Production Facilities	X	X	X	
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983	X	X	X	
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983	X	X	X	
BB	Kraft Pulp Mills	X	X	X	
CC	Glass Manufacturing Plants	X	X	X	X
DD	Grain Elevators	X	X	X	X
EE	Surface Coating of Metal Furniture	X	X	X	
FF	(Reserved)				
GG	Stationary Gas Turbines	X	X	X	X
HH	Lime Manufacturing Plants	X	X	X	
KK	Lead-Acid Battery Manufacturing Plants	X	X	X	
LL	Metallic Mineral Processing Plants	X	X	X	
MM	Automobile and Light Duty Trucks Surface Coating Operations	X	X	X	
NN	Phosphate Rock Plants	X	X	X	
PP	Ammonium Sulfate Manufacture	X	X	X	
QQ	Graphic Arts Industry: Publication Rotogravure Printing	X	X	X	
RR	Pressure Sensitive Tape and Label Surface Coating Operations	X	X	X	
SS	Industrial Surface Coating: Large Appliances	X	X	X	
TT	Metal Coil Surface Coating	X	X	X	
UU	Asphalt Processing and Asphalt Roofing Manufacture	X	X	X	
VV	Equipment Leaks of VOC in the Synthetic Organic Industry Chemicals Manufacturing	X	X	X	
VVa	Equipment Leaks of VOC in the Synthetic Organic Industry for Which Construction, Reconstruction, or Chemicals Manufacturing Modification Commenced After November 7, 2006				X
WW	Beverage Can Surface Coating Industry	X	X	X	
XX	Bulk Gasoline Terminals				

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 608 of 672

AAA	New Residential Wood Heaters	X	X	X	X
BBB	Rubber Tire Manufacturing Industry	X	X	X	
CCC	(Reserved)				
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry	X	X		
EEE	(Reserved)				
FFF	Flexible Vinyl and Urethane Coating and Printing	X	X	X	
GGG	Equipment Leaks of VOC in Petroleum Refineries	X	X	X	
GGGa	Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006				X
HHH	Synthetic Fiber Production Facilities	X	X	X	
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes	X	X		
JJJ	Petroleum Dry Cleaners	X	X	X	
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants	X	X	X	
LLL	Onshore Natural Gas Processing: SO ₂ Emissions	X	X	X	
MMM	(Reserved)				
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations	X	X		
OOO	Nonmetallic Mineral Processing Plants	X	X	X	X
PPP	Wool Fiberglass Insulation Manufacturing Plants	X	X	X	
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems	X	X	X	
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes	X	X	X	
SSS	Magnetic Tape Coating Facilities	X	X	X	
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	X	X	X	
UUU	Calciners and Dryers in Mineral Industries	X	X	X	X
VVV	Polymeric Coating of Supporting Substrates Facilities	X	X	X	X
WWW	Municipal Solid Waste Landfills	X	X	X	X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 609 of 672

AAAA	Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001	X			X
CCCC	Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001	X			X
EEEE	Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006	X			X
GGGG	(Reserved)				
HHHH	(Reserved)				
IIII	Stationary Compression Ignition Internal Combustion Engines				X
JJJJ	Stationary Spark Ignition Internal Combustion Engines				X
KKKK	Stationary Combustion Turbines	X			X
LLLL	New Sewage Sludge Incineration Units				
OOOO	Crude Oil and Natural Gas Production, Transmission, and Distribution				

(viii) Delegations for Shasta County Air Quality Management District, Siskiyou County Air Pollution Control District, South Coast Air Quality Management District, and Tehama County Air Pollution Control District are shown in the following table:

Delegation Status for New Source Performance Standards for Shasta County AQMD, Siskiyou County APCD, South Coast AQMD, and Tehama County APCD

	Subpart	Air pollution control agency			
		Shasta County AQMD	Siskiyou County APCD	South Coast AQMD	Tehama County APCD
A	General Provisions	X	X	X	
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X		X	
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978			X	
Db	Industrial-Commercial-Institutional Steam Generating Units			X	
Dc	Small Industrial-Commercial-Institutional Steam Generating Units			X	
E	Incinerators	X		X	

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 610 of 672

Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994			X	
Eb	Large Municipal Waste Combustors Constructed After September 20, 1994			X	
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996			X	
F	Portland Cement Plants	X		X	
G	Nitric Acid Plants	X		X	
Ga	Nitric Acid Plants For Which Construction, Reconstruction or Modification Commenced After October 14, 2011				
H	Sulfuric Acid Plant	X		X	
I	Hot Mix Asphalt Facilities	X		X	
J	Petroleum Refineries	X		X	
Ja	Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007			X	
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	X		X	
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984			X	
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984			X	
L	Secondary Lead Smelters	X		X	
M	Secondary Brass and Bronze Production Plants	X		X	
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973	X		X	
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983			X	
O	Sewage Treatment Plants	X		X	
P	Primary Copper Smelters	X		X	
Q	Primary Zinc Smelters	X		X	
R	Primary Lead Smelters	X		X	
S	Primary Aluminum Reduction Plants	X		X	

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 611 of 672

T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	X		X	
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	X		X	
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	X		X	
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	X		X	
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	X		X	
Y	Coal Preparation and Processing Plants	X		X	
Z	Ferroalloy Production Facilities	X		X	
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983	X		X	
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983			X	
BB	Kraft Pulp Mills	X		X	
CC	Glass Manufacturing Plants			X	
DD	Grain Elevators	X		X	
EE	Surface Coating of Metal Furniture			X	
FF	(Reserved)				
GG	Stationary Gas Turbines			X	
HH	Lime Manufacturing Plants	X		X	
KK	Lead-Acid Battery Manufacturing Plants			X	
LL	Metallic Mineral Processing Plants			X	
MM	Automobile and Light Duty Trucks Surface Coating Operations			X	
NN	Phosphate Rock Plants			X	
PP	Ammonium Sulfate Manufacture			X	
QQ	Graphic Arts Industry: Publication Rotogravure Printing			X	
RR	Pressure Sensitive Tape and Label Surface Coating Operations			X	
SS	Industrial Surface Coating: Large Appliances			X	
TT	Metal Coil Surface Coating			X	
UU	Asphalt Processing and Asphalt Roofing Manufacture			X	
VV	Equipment Leaks of VOC in the Synthetic Organic Industry Chemicals Manufacturing			X	

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 612 of 672

VVa	Equipment Leaks of VOC in the Synthetic Organic Industry for Which Construction, Reconstruction, or Chemicals Manufacturing Modification Commenced After November 7, 2006			X	
WW	Beverage Can Surface Coating Industry			X	
XX	Bulk Gasoline Terminals				
AAA	New Residential Wood Heaters		X	X	
BBB	Rubber Tire Manufacturing Industry		X	X	
CCC	(Reserved)				
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry			X	
EEE	(Reserved)				
FFF	Flexible Vinyl and Urethane Coating and Printing			X	
GGG	Equipment Leaks of VOC in Petroleum Refineries			X	
GGGa	Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006			X	
HHH	Synthetic Fiber Production Facilities			X	
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes			X	
JJJ	Petroleum Dry Cleaners			X	
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants			X	
LLL	Onshore Natural Gas Processing: SO ₂ Emissions			X	
MMM	(Reserved)				
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations			X	
OOO	Nonmetallic Mineral Processing Plants			X	
PPP	Wool Fiberglass Insulation Manufacturing Plants			X	
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems		X	X	
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes			X	
SSS	Magnetic Tape Coating Facilities		X	X	
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines		X	X	
UUU	Calciners and Dryers in Mineral Industries			X	

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 613 of 672

VVV	Polymeric Coating of Supporting Substrates Facilities			X	
WWW	Municipal Solid Waste Landfills			X	
AAAA	Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001	X	X	X	
CCCC	Commercial and Industrial Solid Waste Incineration Units for Which Construction is Commenced After November 30, 1999 or for Which Modification or Reconstruction is Commenced on or After June 1, 2001			X	
EEEE	Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006			X	
GGGG	(Reserved)				
HHHH	(Reserved)				
IIII	Stationary Compression Ignition Internal Combustion Engines			X	
JJJJ	Stationary Spark Ignition Internal Combustion Engines			X	
KKKK	Stationary Combustion Turbines			X	
LLLL	New Sewage Sludge Incineration Units				
OOOO	Crude Oil and Natural Gas Production, Transmission, and Distribution				

(ix) Delegations for Tuolumne County Air Pollution Control District, Ventura County Air Pollution Control District, and Yolo-Solano Air Quality Management District are shown in the following table:

Delegation Status for New Source Performance Standards for Tuolumne County Air Pollution Control District, Ventura County Air Pollution Control District, and Yolo-Solano Air Quality Management District

	Subpart	Air Pollution Control Agency		
		Tuolumne County APCD	Ventura County APCD	Yolo-Solano AQMD
A	General Provisions	X	X	
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X	X	
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978	X		
Db	Industrial-Commercial-Institutional Steam Generating Units	X	X	
Dc	Small Industrial Steam Generating Units	X		
E	Incinerators	X		

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 614 of 672

Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994	X		
Eb	Municipal Waste Combustors Constructed After September 20, 1994	X		
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996	X		
F	Portland Cement Plants	X		
G	Nitric Acid Plants	X		
H	Sulfuric Acid Plants	X		
I	Hot Mix Asphalt Facilities	X	X	
J	Petroleum Refineries	X	X	
Ja	Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007			
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	X	X	
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	X		
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	X		
L	Secondary Lead Smelters	X		
M	Secondary Brass and Bronze Production Plants	X		
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973	X		
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983	X		
O	Sewage Treatment Plants	X		
P	Primary Copper Smelters	X		
Q	Primary Zinc Smelters	X		
R	Primary Lead Smelters	X		
S	Primary Aluminum Reduction Plants	X		
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	X		
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	X		
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	X		

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 615 of 672

W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	X		
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	X		
Y	Coal Preparation Plants	X		
Z	Ferroalloy Production Facilities	X		
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983	X	X	
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983	X		
BB	Kraft pulp Mills	X		
CC	Glass Manufacturing Plants	X		
DD	Grain Elevators	X		
EE	Surface Coating of Metal Furniture	X		
FF	(Reserved)			
GG	Stationary Gas Turbines	X		
HH	Lime Manufacturing Plants	X		
KK	Lead-Acid Battery Manufacturing Plants	X		
LL	Metallic Mineral Processing Plants	X		
MM	Automobile and Light Duty Trucks Surface Coating Operations	X		
NN	Phosphate Rock Plants	X		
PP	Ammonium Sulfate Manufacture	X		
QQ	Graphic Arts Industry: Publication Rotogravure Printing	X		
RR	Pressure Sensitive Tape and Label Surface Coating Operations	X		
SS	Industrial Surface Coating: Large Appliances	X		
TT	Metal Coil Surface Coating	X		
UU	Asphalt Processing and Asphalt Roofing Manufacture	X		
VV	Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry	X		
VVa	Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006			
WW	Beverage Can Surface Coating Industry	X		

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 616 of 672

XX	Bulk Gasoline Terminals			
AAA	New Residential Wood Heaters	X		
BBB	Rubber Tire Manufacturing Industry	X		
CCC	(Reserved)			
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry	X		
EEE	(Reserved)			
FFF	Flexible Vinyl and Urethane Coating and Printing	X		
GGG	Equipment Leaks of VOC in Petroleum Refineries	X		
GGGa	Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006			
HHH	Synthetic Fiber Production Facilities	X		
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes	X		
JJJ	Petroleum Dry Cleaners	X		
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants	X		
LLL	Onshore Natural Gas Processing: SO2 Emissions	X		
MMM	(Reserved)			
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations	X		
OOO	Nonmetallic Mineral Processing Plants	X	X	
PPP	Wool Fiberglass Insulation Manufacturing Plants	X		
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems	X		
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes	X		
SSS	Magnetic Tape Coating Facilities	X		
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	X		
UUU	Calciners and Dryers in Mineral Industries	X		
VVV	Polymeric Coating of Supporting Substrates Facilities	X		
WWW	Municipal Solid Waste Landfills	X	X	

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 617 of 672

AAAA	Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001	X		
CCCC	Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001	X		
EEEE	Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006			
G G G G	(Reserved)			
IIII	Stationary Compression Ignition Internal Combustion Engines			
J J J J	Stationary Spark Ignition Internal Combustion Engines			
K K K K	Stationary Combustion Turbines			

(3) *Hawaii*. The following table identifies delegations for Hawaii:

Delegation Status for New Source Performance Standards for Hawaii:

	Subpart	Hawaii
A	General Provisions	X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978	X
Db	Industrial-Commercial-Institutional Steam Generating Units	X
Dc	Small Industrial Steam Generating Units	X
E	Incinerators	X
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994	X
Eb	Municipal Waste Combustors Constructed After September 20, 1994	X
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996	X
F	Portland Cement Plants	X
G	Nitric Acid Plants	
H	Sulfuric Acid Plants	
I	Hot Mix Asphalt Facilities	X
J	Petroleum Refineries	X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 618 of 672

Ja	Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007	
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	X
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	X
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	X
L	Secondary Lead Smelters	
M	Secondary Brass and Bronze Production Plants	
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973	
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983	
O	Sewage Treatment Plants	X
P	Primary Copper Smelters	
Q	Primary Zinc Smelters	
R	Primary Lead Smelters	
S	Primary Aluminum Reduction Plants	
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	
Y	Coal Preparation Plants	X
Z	Ferroalloy Production Facilities	
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983	X
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983	X
BB	Kraft pulp Mills	
CC	Glass Manufacturing Plants	
DD	Grain Elevators	
EE	Surface Coating of Metal Furniture	
FF	(Reserved)	

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 619 of 672

GG	Stationary Gas Turbines	X
HH	Lime Manufacturing Plants	
KK	Lead-Acid Battery Manufacturing Plants	
LL	Metallic Mineral Processing Plants	
MM	Automobile and Light Duty Trucks Surface Coating Operations	
NN	Phosphate Rock Plants	
PP	Ammonium Sulfate Manufacture	
QQ	Graphic Arts Industry: Publication Rotogravure Printing	
RR	Pressure Sensitive Tape and Label Surface Coating Operations	
SS	Industrial Surface Coating: Large Appliances	
TT	Metal Coil Surface Coating	
UU	Asphalt Processing and Asphalt Roofing Manufacture	
VV	Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry	X
VVa	Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006	
WW	Beverage Can Surface Coating Industry	X
XX	Bulk Gasoline Terminals	X
AAA	New Residential Wool Heaters	
BBB	Rubber Tire Manufacturing Industry	
CCC	(Reserved)	
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry	
EEE	(Reserved)	
FFF	Flexible Vinyl and Urethane Coating and Printing	
GGG	Equipment Leaks of VOC in Petroleum Refineries	X
GGGa	Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006	
HHH	Synthetic Fiber Production Facilities	
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes	
JJJ	Petroleum Dry Cleaners	X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 620 of 672

KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants	
LLL	Onshore Natural Gas Processing: SO2 Emissions	
MMM	(Reserved)	
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations	X
OOO	Nonmetallic Mineral Processing Plants	X
PPP	Wool Fiberglass Insulation Manufacturing Plants	
QQQ	VOC Emissions From Petroleum Refinery Wastewater	X
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes	
SSS	Magnetic Tape Coating Facilities	
TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	
UUU	Calciners and Dryers in Mineral Industries	X
VVV	Polymeric Coating of Supporting Substrates Facilities	X
WWW	Municipal Solid Waste Landfills	X
AAAA	Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001	X
CCCC	Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001	X
EEEE	Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006	
GGGG	(Reserved)	
IIII	Stationary Compression Ignition Internal Combustion Engines	
JJJJ	Stationary Spark Ignition Internal Combustion Engines	
KKKK	Stationary Combustion Turbines	

(4) Nevada. The following table identifies delegations for Nevada:

Delegation Status for New Source Performance Standards for Nevada

Subpart	Air pollution control agency		
	Nevada DEP	Clark County	Washoe County

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 621 of 672

A	General Provisions	X	X	X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X	X	X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978	X	X	
Db	Industrial-Commercial-Institutional Steam Generating Units	X	X	
Dc	Small Industrial-Commercial-Institutional Steam Generating Units	X	X	
E	Incinerators	X	X	X
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994	X	X	
Eb	Large Municipal Waste Combustors Constructed After September 20, 1994	X	X	
Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996	X	X	
F	Portland Cement Plants	X	X	X
G	Nitric Acid Plants	X	X	
Ga	Nitric Acid Plants For Which Construction, Reconstruction or Modification Commenced After October 14, 2011	X		
H	Sulfuric Acid Plant	X	X	
I	Hot Mix Asphalt Facilities	X	X	X
J	Petroleum Refineries	X	X	
Ja	Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007	X		
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	X	X	X
Ka	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	X	X	X
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	X	X	
L	Secondary Lead Smelters	X	X	X
M	Secondary Brass and Bronze Production Plants	X	X	
N	Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973	X	X	
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983	X	X	
O	Sewage Treatment Plants	X	X	X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 622 of 672

P	Primary Copper Smelters	X	X	X
Q	Primary Zinc Smelters	X	X	X
R	Primary Lead Smelters	X	X	X
S	Primary Aluminum Reduction Plants	X	X	
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Acid Plants	X	X	
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	X	X	
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	X	X	
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	X	X	
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	X	X	
Y	Coal Preparation and Processing Plants	X	X	X
Z	Ferroalloy Production Facilities	X	X	
AA	Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and On or Before August 17, 1983	X	X	
AAa	Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983	X	X	
BB	Kraft Pulp Mills	X	X	
CC	Glass Manufacturing Plants	X	X	
DD	Grain Elevators	X	X	X
EE	Surface Coating of Metal Furniture	X	X	X
FF	(Reserved)			
GG	Stationary Gas Turbines	X	X	X
HH	Lime Manufacturing Plants	X	X	X
KK	Lead-Acid Battery Manufacturing Plants	X	X	X
LL	Metallic Mineral Processing Plants	X	X	X
MM	Automobile and Light Duty Trucks Surface Coating Operations	X	X	X
NN	Phosphate Rock Plants	X	X	X
PP	Ammonium Sulfate Manufacture	X	X	
QQ	Graphic Arts Industry: Publication Rotogravure Printing	X	X	X
RR	Pressure Sensitive Tape and Label Surface Coating Operations	X	X	
SS	Industrial Surface Coating: Large Appliances	X	X	X

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 623 of 672

TT	Metal Coil Surface Coating	X	X	X
UU	Asphalt Processing and Asphalt Roofing Manufacture	X	X	X
VV	Equipment Leaks of VOC in the Synthetic Organic Industry Chemicals Manufacturing	X	X	X
VVa	Equipment Leaks of VOC in the Synthetic Organic Industry for Which Construction, Reconstruction, or Chemicals Manufacturing Modification Commenced After November 7, 2006	X	X	
WW	Beverage Can Surface Coating Industry	X	X	
XX	Bulk Gasoline Terminals	X	X	
AAA	New Residential Wood Heaters		X	
BBB	Rubber Tire Manufacturing Industry	X	X	
CCC	(Reserved)			
DDD	Volatile Organic Compounds (VOC) Emissions from the Polymer Manufacturing Industry	X	X	
EEE	(Reserved)			
FFF	Flexible Vinyl and Urethane Coating and Printing	X	X	
GGG	Equipment Leaks of VOC in Petroleum Refineries	X	X	
GGGa	Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006	X	X	
HHH	Synthetic Fiber Production Facilities	X	X	
III	Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes	X	X	
JJJ	Petroleum Dry Cleaners	X	X	X
KKK	Equipment Leaks of VOC From Onshore Natural Gas Processing Plants	X	X	
LLL	Onshore Natural Gas Processing: SO ₂ Emissions	X	X	
MMM	(Reserved)			
NNN	Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations	X	X	
OOO	Nonmetallic Mineral Processing Plants	X	X	
PPP	Wool Fiberglass Insulation Manufacturing Plants	X	X	
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems	X	X	
RRR	Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes	X	X	
SSS	Magnetic Tape Coating Facilities	X	X	

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 624 of 672

TTT	Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	X	X	X
UUU	Calciners and Dryers in Mineral Industries	X	X	X
VVV	Polymeric Coating of Supporting Substrates Facilities	X	X	X
WWW	Municipal Solid Waste Landfills	X	X	X
AAAA	Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001	X	X	X
CCCC	Commercial and Industrial Solid Waste Incineration Units for Which Construction Is Commenced After November 30, 1999 or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001	X	X	X
EEEE	Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006	X	X	X
GGGG	(Reserved)			
HHHH	(Reserved)			
IIII	Stationary Compression Ignition Internal Combustion Engines	X	X	X
JJJJ	Stationary Spark Ignition Internal Combustion Engines	X	X	X
KKKK	Stationary Combustion Turbines	X	X	X
LLLL	New Sewage Sludge Incineration Units		X	
OOOO	Crude Oil and Natural Gas Production, Transmission, and Distribution	X		

(5) *Guam*. The following table identifies delegations as of June 15, 2001:

Delegation Status for New Source Performance Standards for Guam

	Subpart	Guam
A	General Provisions	X
D	Fossil-Fuel Fired Steam Generators Constructed After August 17, 1971	X
Da	Electric Utility Steam Generating Units Constructed After September 18, 1978	
Db	Industrial-Commercial-Institutional Steam Generating Units	
Dc	Small Industrial Steam Generating Units	
E	Incinerators	
Ea	Municipal Waste Combustors Constructed After December 20, 1989 and On or Before September 20, 1994	
Eb	Municipal Waste Combustors Constructed After September 20, 1994	

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 625 of 672

Ec	Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996	
F	Portland Cement Plants	X
G	Nitric Acid Plants	
H	Sulfuric Acid Plants	
I	Hot Mix Asphalt Facilities	X
J	Petroleum Refineries	X
K	Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	X

(e) The following lists the specific part 60 standards that have been delegated unchanged to the air pollution control agencies in Region 6.

(1) *New Mexico*. The New Mexico Environment Department has been delegated all part 60 standards promulgated by EPA, except subpart AAA—Standards of Performance for New Residential Wood Heaters; and subpart HHHH—Emission Guidelines and Compliance Times for Coal-Fired Electric Steam Generating Units, as amended in the FEDERAL REGISTER through September 23, 2013.

(2) *Louisiana*. The Louisiana Department of Environmental Quality has been delegated all part 60 standards promulgated by EPA, except subpart AAA—Standards of Performance for New Residential Wood Heaters, as amended in the FEDERAL REGISTER through July 1, 2013.

Delegation Status for Part 60 Standards—State of Louisiana
 [Excluding Indian Country]

Subpart	Source category	LDEQ ²
A	General Provisions	Yes
Ce	Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators	Yes
D	Fossil Fueled Steam Generators (>250 MM BTU/hr)	Yes
Da	Electric Utility Steam Generating Units (>250 MM BTU/hr)	Yes
Db	Industrial-Commercial-Institutional Steam Generating Units (100 to 250 MM BTU/hr)	Yes
Dc	Industrial-Commercial-Institutional Small Steam Generating Units (10 to 100 MM BTU/hr)	Yes
E	Incinerators (>50 tons per day)	Yes
Ea	Municipal Waste Combustors	Yes
Eb	Large Municipal Waste Combustors	Yes
Ec	Hospital/Medical/Infectious Waste Incinerators	Yes
F	Portland Cement Plants	Yes

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 626 of 672

G	Nitric Acid Plants	Yes
Ga	Nitric Acid Plants (after October 14, 2011)	Yes
H	Sulfuric Acid Plants	Yes
I	Hot Mix Asphalt Facilities	Yes
J	Petroleum Refineries	Yes
Ja	Petroleum Refineries (After May 14, 2007)	Yes
K	Storage Vessels for Petroleum Liquids (After 6/11/73 & Before 5/19/78)	Yes
Ka	Storage Vessels for Petroleum Liquids (After 6/11/73 & Before 5/19/78)	Yes
Kb	Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Stg/Vessels) After 7/23/84	Yes
L	Secondary Lead Smelters Yes	Yes
M	Secondary Brass and Bronze Production Plants	Yes
N	Primary Emissions from Basic Oxygen Process Furnaces (Construction Commenced After June 11, 1973)	Yes
Na	Secondary Emissions from Basic Oxygen Process Steelmaking Facilities Construction is Commenced After January 20, 1983	Yes
O	Sewage Treatment Plants	Yes
P	Primary Copper Smelters	Yes
Q	Primary Zinc Smelters	Yes
R	Primary Lead Smelters	Yes
S	Primary Aluminum Reduction Plants	Yes
T	Phosphate Fertilizer Industry: Wet Process Phosphoric Plants	Yes
U	Phosphate Fertilizer Industry: Superphosphoric Acid Plants	Yes
V	Phosphate Fertilizer Industry: Diammonium Phosphate Plants	Yes
W	Phosphate Fertilizer Industry: Triple Superphosphate Plants	Yes
X	Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	Yes
Y	Coal Preparation Plants	Yes
Z	Ferroalloy Production Facilities	Yes
AA	Steel Plants: Electric Arc Furnaces After 10/21/74 & On or Before 8/17/83	Yes
AAa	Steel Plants: Electric Arc Furnaces & Argon-Oxygen Decarburization Vessels After 8/07/83	Yes
BB	Kraft Pulp Mills	Yes
CC	Glass Manufacturing Plants	Yes

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 627 of 672

DD	Grain Elevators	Yes
EE	Surface Coating of Metal Furniture	Yes
GG	Stationary Gas Turbines	Yes
HH	Lime Manufacturing Plants	Yes
KK	Lead-Acid Battery Manufacturing Plants	Yes
LL	Metallic Mineral Processing Plants	Yes
MM	Automobile & Light Duty Truck Surface Coating Operations	Yes
NN	Phosphate Manufacturing Plants	Yes
PP	Ammonium Sulfate Manufacture	Yes
QQ	Graphic Arts Industry: Publication Rotogravure Printing	Yes
RR	Pressure Sensitive Tape and Label Surface Coating Operations	Yes
SS	Industrial Surface Coating: Large Appliances	Yes
TT	Metal Coil Surface Coating	Yes
UU	Asphalt Processing and Asphalt Roofing Manufacture	Yes
VV	VOC Equipment Leaks in the SOCOMI Industry	Yes
VVa	VOC Equipment Leaks in the SOCOMI Industry (After November 7, 2006)	Yes
XX	Bulk Gasoline Terminals	Yes
AAA	New Residential Wood Heaters	No
BBB	Rubber Tire Manufacturing Industry	Yes
DDD	Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry	Yes
FFF	Flexible Vinyl and Urethane Coating and Printing	Yes
GGG	VOC Equipment Leaks in Petroleum Refineries	Yes
HHH	Synthetic Fiber Production	Yes
III	VOC Emissions from the SOCOMI Air Oxidation Unit Processes	Yes
JJJ	Petroleum Dry Cleaners	Yes
KKK	VOC Equipment Leaks From Onshore Natural Gas Processing Plants	Yes
LLL	Onshore Natural Gas Processing: SO ₂ Emissions	Yes
NNN	VOC Emissions from SOCOMI Distillation Operations	Yes
OOO	Nonmetallic Mineral Processing Plants	Yes

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 628 of 672

PPP	Wool Fiberglass Insulation Manufacturing Plants	Yes
QQQ	VOC Emissions From Petroleum Refinery Wastewater Systems	Yes
RRR	VOC Emissions from SOCOMI Reactor Processes	Yes
SSS	Magnetic Tape Coating Operations	Yes
TTT	Industrial Surface Coating: Plastic Parts for Business Machines	Yes
UUU	Calciners and Dryers in Mineral Industries	Yes
VVV	Polymeric Coating of Supporting Substrates Facilities	Yes
WWW	Municipal Solid Waste Landfills	Yes
AAAA	Small Municipal Waste Combustion Units (Construction is Commenced After 8/30/99 or Modification/Reconstruction is Commenced After 6/06/2001)	Yes
CCCC	Commercial & Industrial Solid Waste Incineration Units (Construction is Commenced After 11/30/1999 or Modification/Reconstruction is Commenced on or After 6/01/2001)	Yes
DDDD	Emission Guidelines & Compliance Times for Commercial & Industrial Solid Waste Incineration Units (Commenced Construction On or Before 11/30/1999)	Yes
EEEE	Other Solid Waste Incineration Units (Constructed after 12/09/2004 or Modification/Reconstruction is commenced on or after 06/16/2004)	Yes
IIII	Stationary Compression Ignition Internal Combustion Engines	Yes
JJJJ	Stationary Spark Ignition Internal Combustion Engines	Yes
KKKK	Stationary Combustion Turbines (Construction Commenced After 02/18/2005)	Yes
LLLL	New Sewage Sludge Incineration Units	Yes
MMMM	Emission Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units	Yes
Oooo	Crude Oil and Natural Gas Production, Transmission and Distribution	Yes

¹The Louisiana Department of Environmental Quality (LDEQ) has been delegated all Part 60 standards promulgated by EPA, except subpart AAA—Standards of Performance for New Residential Wood Heaters—as amended in the FEDERAL REGISTER through July 1, 2013.

(3) *Albuquerque-Bernalillo County Air Quality Control Board.* The Albuquerque-Bernalillo County Air Quality Control Board has been delegated all part 60 standards promulgated by EPA, except subpart AAA—Standards of Performance for New Residential Wood Heaters, as amended in the FEDERAL REGISTER through September 13, 2013.

§60.5 Determination of construction or modification.

(a) When requested to do so by an owner or operator, the Administrator will make a determination of whether action taken or intended to be taken by such owner or operator constitutes construction (including reconstruction) or modification or the commencement thereof within the meaning of this part.

(b) The Administrator will respond to any request for a determination under paragraph (a) of this section within 30 days of receipt of such request.

§60.6 Review of plans.

- (a) When requested to do so by an owner or operator, the Administrator will review plans for construction or modification for the purpose of providing technical advice to the owner or operator.
- (b)(1) A separate request shall be submitted for each construction or modification project.
- (2) Each request shall identify the location of such project, and be accompanied by technical information describing the proposed nature, size, design, and method of operation of each affected facility involved in such project, including information on any equipment to be used for measurement or control of emissions.
- (c) Neither a request for plans review nor advice furnished by the Administrator in response to such request shall (1) relieve an owner or operator of legal responsibility for compliance with any provision of this part or of any applicable State or local requirement, or (2) prevent the Administrator from implementing or enforcing any provision of this part or taking any other action authorized by the Act.

§60.7 Notification and record keeping.

- (a) Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, as follows:
- (1) A notification of the date construction (or reconstruction as defined under §60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
- (2) [Reserved]
- (3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
- (4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.
- (5) A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with §60.13(c). Notification shall be postmarked not less than 30 days prior to such date.
- (6) A notification of the anticipated date for conducting the opacity observations required by §60.11(e)(1) of this part. The notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.
- (7) A notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by §60.8 in lieu of Method 9 observation data as allowed by §60.11(e)(5) of this part. This notification shall be postmarked not less than 30 days prior to the date of the performance test.
- (b) Any owner or operator subject to the provisions of this part shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air

pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

(c) Each owner or operator required to install a continuous monitoring device shall submit excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and-or summary report form (see paragraph (d) of this section) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:

- (1) The magnitude of excess emissions computed in accordance with §60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
- (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
- (3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
- (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

(d) The summary report form shall contain the information and be in the format shown in figure 1 unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

- (1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in §60.7(c) need not be submitted unless requested by the Administrator.
- (2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in §60.7(c) shall both be submitted.

Figure 1—Summary Report—Gaseous and Opacity Excess Emission and Monitoring System Performance

Pollutant (Circle One—SO₂/NO_x/TRS/H₂S/CO/Opacity)

Reporting period dates: From _____ to _____

Company:

Emission Limitation

Address:

Monitor Manufacturer and Model No.

Date of Latest CMS Certification or Audit

Process Unit(s) Description:

Permit Issued: [month day, year]
 Permit Expires: [month day, year]

12300341-101
 Page 631 of 672

Total source operating time in reporting period¹

Emission data summary ¹		CMS performance summary ¹	
1. Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Startup/shutdown		a. Monitor equipment malfunctions	
b. Control equipment problems		b. Non-Monitor equipment malfunctions	
c. Process problems		c. Quality assurance calibration	
d. Other known causes		d. Other known causes	
e. Unknown causes		e. Unknown causes	
2. Total duration of excess emission		2. Total CMS Downtime	
3. Total duration of excess emissions × (100) [Total source operating time]	% ²	3. [Total CMS Downtime] × (100) [Total source operating time]	% ²

¹For opacity, record all times in minutes. For gases, record all times in hours.

²For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in §60.7(c) shall be submitted.

On a separate page, describe any changes since last quarter in CMS, process or controls. I certify that the information contained in this report is true, accurate, and complete.

Name _____

Signature _____

Title _____

Date _____

(e)(1) Notwithstanding the frequency of reporting requirements specified in paragraph (c) of this section, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;

(ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the applicable standard; and

(iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in paragraph (e)(2) of this section.

(2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to

make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in paragraphs (e)(1) and (e)(2) of this section.

(f) Any owner or operator subject to the provisions of this part shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records, except as follows:

(1) This paragraph applies to owners or operators required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (f) of this section, the owner or operator shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.

(2) This paragraph applies to owners or operators required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (f) of this section, the owner or operator shall retain all subhourly measurements for the most recent reporting period. The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted to the Administrator.

(3) The Administrator or delegated authority, upon notification to the source, may require the owner or operator to maintain all measurements as required by paragraph (f) of this section, if the Administrator or the delegated authority determines these records are required to more accurately assess the compliance status of the affected source.

(g) If notification substantially similar to that in paragraph (a) of this section is required by any other State or local agency, sending the Administrator a copy of that notification will satisfy the requirements of paragraph (a) of this section.

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 633 of 672

(h) Individual subparts of this part may include specific provisions which clarify or make inapplicable the provisions set forth in this section.

§60.8 Performance tests.

(a) Except as specified in paragraphs (a)(1),(a)(2), (a)(3), and (a)(4) of this section, within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, or at such other times specified by this part, and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

(1) If a force majeure is about to occur, occurs, or has occurred for which the affected owner or operator intends to assert a claim of force majeure, the owner or operator shall notify the Administrator, in writing as soon as practicable following the date the owner or operator first knew, or through due diligence should have known that the event may cause or caused a delay in testing beyond the regulatory deadline, but the notification must occur before the performance test deadline unless the initial force majeure or a subsequent force majeure event delays the notice, and in such cases, the notification shall occur as soon as practicable.

(2) The owner or operator shall provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in testing beyond the regulatory deadline to the force majeure; describe the measures taken or to be taken to minimize the delay; and identify a date by which the owner or operator proposes to conduct the performance test. The performance test shall be conducted as soon as practicable after the force majeure occurs.

(3) The decision as to whether or not to grant an extension to the performance test deadline is solely within the discretion of the Administrator. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an extension as soon as practicable.

(4) Until an extension of the performance test deadline has been approved by the Administrator under paragraphs (a)(1), (2), and (3) of this section, the owner or operator of the affected facility remains strictly subject to the requirements of this part.

(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance, (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

(c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

(d) The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to

operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the Administrator (or delegated State or local agency) as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator (or delegated State or local agency) by mutual agreement.

(e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

- (1) Sampling ports adequate for test methods applicable to such facility. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.
- (2) Safe sampling platform(s).
- (3) Safe access to sampling platform(s).
- (4) Utilities for sampling and testing equipment.

(f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method.

(1) Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

(2) Contents of report (electronic or paper submitted copy). Unless otherwise specified in a relevant standard or test method, or as otherwise approved by the Administrator in writing, the report for a performance test shall include the elements identified in paragraphs (f)(2)(i) through (vi) of this section.

(i) General identification information for the facility including a mailing address, the physical address, the owner or operator or responsible official (where applicable) and his/her email address, and the appropriate Federal Registry System (FRS) number for the facility.

(ii) Purpose of the test including the applicable regulation(s) requiring the test, the pollutant(s) and other parameters being measured, the applicable emission standard and any process parameter component, and a brief process description.

(iii) Description of the emission unit tested including fuel burned, control devices, and vent characteristics; the appropriate source classification code (SCC); the permitted maximum process rate (where applicable); and the sampling location.

(iv) Description of sampling and analysis procedures used and any modifications to standard procedures, quality assurance procedures and results, record of process operating conditions that demonstrate the applicable test conditions are met, and values for any operating parameters for which limits were being set during the test.

(v) Where a test method requires you record or report, the following shall be included: Record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for

field and laboratory analyses, chain-of-custody documentation, and example calculations for reported results.

(vi) Identification of the company conducting the performance test including the primary office address, telephone number, and the contact for this test program including his/her email address.

(g) The performance testing shall include a test method performance audit (PA) during the performance test. The PAs consist of blind audit samples supplied by an accredited audit sample provider and analyzed during the performance test in order to provide a measure of test data bias. Gaseous audit samples are designed to audit the performance of the sampling system as well as the analytical system and must be collected by the sampling system during the compliance test just as the compliance samples are collected. If a liquid or solid audit sample is designed to audit the sampling system, it must also be collected by the sampling system during the compliance test. If multiple sampling systems or sampling trains are used during the compliance test for any of the test methods, the tester is only required to use one of the sampling systems per method to collect the audit sample. The audit sample must be analyzed by the same analyst using the same analytical reagents and analytical system and at the same time as the compliance samples. Retests are required when there is a failure to produce acceptable results for an audit sample. However, if the audit results do not affect the compliance or noncompliance status of the affected facility, the compliance authority may waive the reanalysis requirement, further audits, or retests and accept the results of the compliance test. Acceptance of the test results shall constitute a waiver of the reanalysis requirement, further audits, or retests. The compliance authority may also use the audit sample failure and the compliance test results as evidence to determine the compliance or noncompliance status of the affected facility. A blind audit sample is a sample whose value is known only to the sample provider and is not revealed to the tested facility until after they report the measured value of the audit sample. For pollutants that exist in the gas phase at ambient temperature, the audit sample shall consist of an appropriate concentration of the pollutant in air or nitrogen that can be introduced into the sampling system of the test method at or near the same entry point as a sample from the emission source. If no gas phase audit samples are available, an acceptable alternative is a sample of the pollutant in the same matrix that would be produced when the sample is recovered from the sampling system as required by the test method. For samples that exist only in a liquid or solid form at ambient temperature, the audit sample shall consist of an appropriate concentration of the pollutant in the same matrix that would be produced when the sample is recovered from the sampling system as required by the test method. An accredited audit sample provider (AASP) is an organization that has been accredited to prepare audit samples by an independent, third party accrediting body.

(1) The source owner, operator, or representative of the tested facility shall obtain an audit sample, if commercially available, from an AASP for each test method used for regulatory compliance purposes. No audit samples are required for the following test methods: Methods 3A and 3C of appendix A-3 of part 60, Methods 6C, 7E, 9, and 10 of appendix A-4 of part 60, Methods 18 and 19 of appendix A-6 of part 60, Methods 20, 22, and 25A of appendix A-7 of part 60, Methods 30A and 30B of appendix A-8 of part 60, and Methods 303, 318, 320, and 321 of appendix A of part 63 of this chapter. If multiple sources at a single facility are tested during a compliance test event, only one audit sample is required for each method used during a compliance test. The compliance authority responsible for the compliance test may waive the requirement to include an audit sample if they believe that an audit sample is not necessary. "Commercially available" means that two or more independent AASPs have blind audit samples available for purchase. If the source owner, operator, or representative cannot find an audit sample for a specific method, the owner, operator, or representative shall consult the EPA Web site at the following URL, www.epa.gov/ttn/emc, to confirm whether there is a source that can supply an audit sample for that method. If the EPA Web site does not list an available audit sample at least 60 days prior to the beginning of the compliance test, the source owner, operator, or representative shall not be required to include an audit sample as part of the quality assurance program for the compliance test. When ordering an audit sample, the source owner, operator, or representative shall give the sample provider an estimate for the concentration of each pollutant that is emitted by the source or the estimated concentration of

each pollutant based on the permitted level and the name, address, and phone number of the compliance authority. The source owner, operator, or representative shall report the results for the audit sample along with a summary of the emission test results for the audited pollutant to the compliance authority and shall report the results of the audit sample to the AASP. The source owner, operator, or representative shall make both reports at the same time and in the same manner or shall report to the compliance authority first and then report to the AASP. If the method being audited is a method that allows the samples to be analyzed in the field and the tester plans to analyze the samples in the field, the tester may analyze the audit samples prior to collecting the emission samples provided a representative of the compliance authority is present at the testing site. The tester may request and the compliance authority may grant a waiver to the requirement that a representative of the compliance authority must be present at the testing site during the field analysis of an audit sample. The source owner, operator, or representative may report the results of the audit sample to the compliance authority and report the results of the audit sample to the AASP prior to collecting any emission samples. The test protocol and final test report shall document whether an audit sample was ordered and utilized and the pass/fail results as applicable.

(2) An AASP shall have and shall prepare, analyze, and report the true value of audit samples in accordance with a written technical criteria document that describes how audit samples will be prepared and distributed in a manner that will ensure the integrity of the audit sample program. An acceptable technical criteria document shall contain standard operating procedures for all of the following operations:

- (i) Preparing the sample;
- (ii) Confirming the true concentration of the sample;
- (iii) Defining the acceptance limits for the results from a well qualified tester. This procedure must use well established statistical methods to analyze historical results from well qualified testers. The acceptance limits shall be set so that there is 95 percent confidence that 90 percent of well qualified labs will produce future results that are within the acceptance limit range.
- (iv) Providing the opportunity for the compliance authority to comment on the selected concentration level for an audit sample;
- (v) Distributing the sample to the user in a manner that guarantees that the true value of the sample is unknown to the user;
- (vi) Recording the measured concentration reported by the user and determining if the measured value is within acceptable limits;
- (vii) The AASP shall report the results from each audit sample in a timely manner to the compliance authority and then to the source owner, operator, or representative. The AASP shall make both reports at the same time and in the same manner or shall report to the compliance authority first and then report to the source owner, operator, or representative. The results shall include the name of the facility tested, the date on which the compliance test was conducted, the name of the company performing the sample collection, the name of the company that analyzed the compliance samples including the audit sample, the measured result for the audit sample, and whether the testing company passed or failed the audit. The AASP shall report the true value of the audit sample to the compliance authority. The AASP may report the true value to the source owner, operator, or representative if the AASP's operating plan ensures that no laboratory will receive the same audit sample twice.
- (viii) Evaluating the acceptance limits of samples at least once every two years to determine in cooperation with the voluntary consensus standard body if they should be changed;

(ix) Maintaining a database, accessible to the compliance authorities, of results from the audit that shall include the name of the facility tested, the date on which the compliance test was conducted, the name of the company performing the sample collection, the name of the company that analyzed the compliance samples including the audit sample, the measured result for the audit sample, the true value of the audit sample, the acceptance range for the measured value, and whether the testing company passed or failed the audit.

(3) The accrediting body shall have a written technical criteria document that describes how it will ensure that the AASP is operating in accordance with the AASP technical criteria document that describes how audit samples are to be prepared and distributed. This document shall contain standard operating procedures for all of the following operations:

- (i) Checking audit samples to confirm their true value as reported by the AASP;
- (ii) Performing technical systems audits of the AASP's facilities and operating procedures at least once every two years;
- (iii) Providing standards for use by the voluntary consensus standard body to approve the accrediting body that will accredit the audit sample providers.

(4) The technical criteria documents for the accredited sample providers and the accrediting body shall be developed through a public process guided by a voluntary consensus standards body (VCSB). The VCSB shall operate in accordance with the procedures and requirements in the Office of Management and Budget Circular A-119. A copy of Circular A-119 is available upon request by writing the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW., Washington, DC 20503, by calling (202) 395-6880 or downloading online at http://standards.gov/standards_gov/a119.cfm. The VCSB shall approve all accrediting bodies. The Administrator will review all technical criteria documents. If the technical criteria documents do not meet the minimum technical requirements in paragraphs (g)(2) through (4) of this section, the technical criteria documents are not acceptable and the proposed audit sample program is not capable of producing audit samples of sufficient quality to be used in a compliance test. All acceptable technical criteria documents shall be posted on the EPA Web site at the following URL, <http://www.epa.gov/ttn/emc>.

(h) Unless otherwise specified in the applicable subpart, each test location must be verified to be free of cyclonic flow and evaluated for the existence of emission gas stratification and the required number of sampling traverse points. If other procedures are not specified in the applicable subpart to the regulations, use the appropriate procedures in Method 1 to check for cyclonic flow and Method 7E to evaluate emission gas stratification and selection of sampling points.

(i) Whenever the use of multiple calibration gases is required by a test method, performance specification, or quality assurance procedure in a part 60 standard or appendix, Method 205 of 40 CFR part 51, appendix M of this chapter, "Verification of Gas Dilution Systems for Field Instrument Calibrations," may be used.

§60.9 Availability of information.

The availability to the public of information provided to, or otherwise obtained by, the Administrator under this part shall be governed by part 2 of this chapter. (Information submitted voluntarily to the Administrator for the purposes of §§60.5 and 60.6 is governed by §§2.201 through 2.213 of this chapter and not by §2.301 of this chapter.)

§60.10 State authority.

The provisions of this part shall not be construed in any manner to preclude any State or political subdivision thereof from:

- (a) Adopting and enforcing any emission standard or limitation applicable to an affected facility, provided that such emission standard or limitation is not less stringent than the standard applicable to such facility.

(b) Requiring the owner or operator of an affected facility to obtain permits, licenses, or approvals prior to initiating construction, modification, or operation of such facility.

§60.11 Compliance with standards and maintenance requirements.

(a) Compliance with standards in this part, other than opacity standards, shall be determined in accordance with performance tests established by §60.8, unless otherwise specified in the applicable standard.

(b) Compliance with opacity standards in this part shall be determined by conducting observations in accordance with Method 9 in appendix A of this part, any alternative method that is approved by the Administrator, or as provided in paragraph (e)(5) of this section. For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard).

(c) The opacity standards set forth in this part shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.

(d) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(e)(1) For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in §60.8 unless one of the following conditions apply. If no performance test under §60.8 is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under §60.8, the source owner or operator shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. In these cases, the 30-day prior notification to the Administrator required in §60.7(a)(6) shall be waived. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under §60.8. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Method 9 of appendix B of this part. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The owner or operator of an affected facility shall make available, upon request by the Administrator, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. Except as provided in paragraph (e)(5) of this section, the results of continuous monitoring by transmissometer which indicate that the opacity at the time visual observations were made was not in excess of the standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in appendix B of this part, has been properly maintained and (at the time of the alleged violation) that the resulting data have not been altered in any way.

(2) Except as provided in paragraph (e)(3) of this section, the owner or operator of an affected facility to which an opacity standard in this part applies shall conduct opacity observations in accordance with paragraph (b) of this section, shall record the opacity of emissions, and shall report to the Administrator the opacity results along with the results of the initial performance test required under §60.8. The inability of an owner or operator to

secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.

(3) The owner or operator of an affected facility to which an opacity standard in this part applies may request the Administrator to determine and to record the opacity of emissions from the affected facility during the initial performance test and at such times as may be required. The owner or operator of the affected facility shall report the opacity results. Any request to the Administrator to determine and to record the opacity of emissions from an affected facility shall be included in the notification required in §60.7(a)(6). If, for some reason, the Administrator cannot determine and record the opacity of emissions from the affected facility during the performance test, then the provisions of paragraph (e)(1) of this section shall apply.

(4) An owner or operator of an affected facility using a continuous opacity monitor (transmissometer) shall record the monitoring data produced during the initial performance test required by §60.8 and shall furnish the Administrator a written report of the monitoring results along with Method 9 and §60.8 performance test results.

(5) An owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under §60.8 in lieu of Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he shall notify the Administrator of that decision, in writing, at least 30 days before any performance test required under §60.8 is conducted. Once the owner or operator of an affected facility has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under §60.8 until the owner or operator notifies the Administrator, in writing, to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under §60.8 using COMS data, the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under §60.8. The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in §60.13(c) of this part, that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for compliance with the opacity standard for a period of time during which Method 9 data indicates noncompliance, the Method 9 data will be used to determine compliance with the opacity standard.

(6) Upon receipt from an owner or operator of the written reports of the results of the performance tests required by §60.8, the opacity observation results and observer certification required by §60.11(e)(1), and the COMS results, if applicable, the Administrator will make a finding concerning compliance with opacity and other applicable standards. If COMS data results are used to comply with an opacity standard, only those results are required to be submitted along with the performance test results required by §60.8. If the Administrator finds that an affected facility is in compliance with all applicable standards for which performance tests are conducted in accordance with §60.8 of this part but during the time such performance tests are being conducted fails to meet any applicable opacity standard, he shall notify the owner or operator and advise him that he may petition the Administrator within 10 days of receipt of notification to make appropriate adjustment to the opacity standard for the affected facility.

(7) The Administrator will grant such a petition upon a demonstration by the owner or operator that the affected facility and associated air pollution control equipment was operated and maintained in a manner to minimize the opacity of emissions during the performance tests; that the performance tests were performed under the conditions established by the Administrator; and that the affected facility and associated air pollution control equipment were incapable of being adjusted or operated to meet the applicable opacity standard.

(8) The Administrator will establish an opacity standard for the affected facility meeting the above requirements at a level at which the source will be able, as indicated by the performance and opacity tests, to meet the opacity standard at all times during which the source is meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity standard in the FEDERAL REGISTER.

(f) Special provisions set forth under an applicable subpart shall supersede any conflicting provisions in paragraphs (a) through (e) of this section.

(g) For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this part, nothing in this part shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

§60.12 Circumvention.

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

§60.13 Monitoring requirements.

(a) For the purposes of this section, all continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under appendix B to this part and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, appendix F to this part, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.

(b) All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under §60.8. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.

(c) If the owner or operator of an affected facility elects to submit continuous opacity monitoring system (COMS) data for compliance with the opacity standard as provided under §60.11(e)(5), he shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, appendix B, of this part before the performance test required under §60.8 is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under §60.8 or within 30 days thereafter in accordance with the applicable performance specification in appendix B of this part. The owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.

(1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under §60.8 and as described in §60.11(e)(5) shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in paragraph (c) of this section at least 10 days before the performance test required under §60.8 is conducted.

(2) Except as provided in paragraph (c)(1) of this section, the owner or operator of an affected facility shall furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.

(d)(1) Owners and operators of a CEMS installed in accordance with the provisions of this part, must check the zero (or low level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once each operating day in accordance with a written procedure. The zero and span must, at a minimum, be adjusted whenever either the 24-hour zero drift or the 24-hour span drift exceeds two times the limit

of the applicable performance specification in appendix B of this part. The system must allow the amount of the excess zero and span drift to be recorded and quantified whenever specified. Owners and operators of a COMS installed in accordance with the provisions of this part must check the zero and upscale (span) calibration drifts at least once daily. For a particular COMS, the acceptable range of zero and upscale calibration materials is defined in the applicable version of PS-1 in appendix B of this part. For a COMS, the optical surfaces, exposed to the effluent gases, must be cleaned before performing the zero and upscale drift adjustments, except for systems using automatic zero adjustments. The optical surfaces must be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.

(2) Unless otherwise approved by the Administrator, the following procedures must be followed for a COMS. Minimum procedures must include an automated method for producing a simulated zero opacity condition and an upscale opacity condition using a certified neutral density filter or other related technique to produce a known obstruction of the light beam. Such procedures must provide a system check of all active analyzer internal optics with power or curvature, all active electronic circuitry including the light source and photodetector assembly, and electronic or electro-mechanical systems and hardware and or software used during normal measurement operation.

(e) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(1) All continuous monitoring systems referenced by paragraph (c) of this section for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(2) All continuous monitoring systems referenced by paragraph (c) of this section for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(f) All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of appendix B of this part shall be used.

(g) When the effluents from a single affected facility or two or more affected facilities subject to the same emission standards are combined before being released to the atmosphere, the owner or operator may install applicable continuous monitoring systems on each effluent or on the combined effluent. When the affected facilities are not subject to the same emission standards, separate continuous monitoring systems shall be installed on each effluent. When the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator shall install an applicable continuous monitoring system on each separate effluent unless the installation of fewer systems is approved by the Administrator. When more than one continuous monitoring system is used to measure the emissions from one affected facility (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required from each continuous monitoring system.

(h)(1) Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to 6-minute averages and for continuous monitoring systems other than opacity to 1-hour averages for time periods as defined in §60.2. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period.

(2) For continuous monitoring systems other than opacity, 1-hour averages shall be computed as follows, except that the provisions pertaining to the validation of partial operating hours are only applicable for affected facilities that are required by the applicable subpart to include partial hours in the emission calculations:

(i) Except as provided under paragraph (h)(2)(iii) of this section, for a full operating hour (any clock hour with 60 minutes of unit operation), at least four valid data points are required to calculate the hourly average, *i.e.*, one data point in each of the 15-minute quadrants of the hour.

(ii) Except as provided under paragraph (h)(2)(iii) of this section, for a partial operating hour (any clock hour with less than 60 minutes of unit operation), at least one valid data point in each 15-minute quadrant of the hour in which the unit operates is required to calculate the hourly average.

(iii) For any operating hour in which required maintenance or quality-assurance activities are performed:

(A) If the unit operates in two or more quadrants of the hour, a minimum of two valid data points, separated by at least 15 minutes, is required to calculate the hourly average; or

(B) If the unit operates in only one quadrant of the hour, at least one valid data point is required to calculate the hourly average.

(iv) If a daily calibration error check is failed during any operating hour, all data for that hour shall be invalidated, unless a subsequent calibration error test is passed in the same hour and the requirements of paragraph (h)(2)(iii) of this section are met, based solely on valid data recorded after the successful calibration.

(v) For each full or partial operating hour, all valid data points shall be used to calculate the hourly average.

(vi) Except as provided under paragraph (h)(2)(vii) of this section, data recorded during periods of continuous monitoring system breakdown, repair, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph.

(vii) Owners and operators complying with the requirements of §60.7(f)(1) or (2) must include any data recorded during periods of monitor breakdown or malfunction in the data averages.

(viii) When specified in an applicable subpart, hourly averages for certain partial operating hours shall not be computed or included in the emission averages (e.g., hours with < 30 minutes of unit operation under §60.47b(d)).

(ix) Either arithmetic or integrated averaging of all data may be used to calculate the hourly averages. The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O₂ or ng/J of pollutant).

(3) All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in the applicable subpart. After conversion into units of the standard, the data may be rounded to the same number of significant digits used in the applicable subpart to specify the emission limit.

(i) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring procedures or requirements of this part including, but not limited to the following:

(1) Alternative monitoring requirements when installation of a continuous monitoring system or monitoring device specified by this part would not provide accurate measurements due to liquid water or other interferences caused by substances in the effluent gases.

(2) Alternative monitoring requirements when the affected facility is infrequently operated.

(3) Alternative monitoring requirements to accommodate continuous monitoring systems that require additional measurements to correct for stack moisture conditions.

- (4) Alternative locations for installing continuous monitoring systems or monitoring devices when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements.
 - (5) Alternative methods of converting pollutant concentration measurements to units of the standards.
 - (6) Alternative procedures for performing daily checks of zero and span drift that do not involve use of span gases or test cells.
 - (7) Alternatives to the A.S.T.M. test methods or sampling procedures specified by any subpart.
 - (8) Alternative continuous monitoring systems that do not meet the design or performance requirements in Performance Specification 1, appendix B, but adequately demonstrate a definite and consistent relationship between its measurements and the measurements of opacity by a system complying with the requirements in Performance Specification 1. The Administrator may require that such demonstration be performed for each affected facility.
 - (9) Alternative monitoring requirements when the effluent from a single affected facility or the combined effluent from two or more affected facilities is released to the atmosphere through more than one point.
- (j) An alternative to the relative accuracy (RA) test specified in Performance Specification 2 of appendix B may be requested as follows:
- (1) An alternative to the reference method tests for determining RA is available for sources with emission rates demonstrated to be less than 50 percent of the applicable standard. A source owner or operator may petition the Administrator to waive the RA test in Section 8.4 of Performance Specification 2 and substitute the procedures in Section 16.0 if the results of a performance test conducted according to the requirements in §60.8 of this subpart or other tests performed following the criteria in §60.8 demonstrate that the emission rate of the pollutant of interest in the units of the applicable standard is less than 50 percent of the applicable standard. For sources subject to standards expressed as control efficiency levels, a source owner or operator may petition the Administrator to waive the RA test and substitute the procedures in Section 16.0 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the continuous emission monitoring system is used to determine compliance continuously with the applicable standard. The petition to waive the RA test shall include a detailed description of the procedures to be applied. Included shall be location and procedure for conducting the alternative, the concentration or response levels of the alternative RA materials, and the other equipment checks included in the alternative procedure. The Administrator will review the petition for completeness and applicability. The determination to grant a waiver will depend on the intended use of the CEMS data (e.g., data collection purposes other than NSPS) and may require specifications more stringent than in Performance Specification 2 (e.g., the applicable emission limit is more stringent than NSPS).
 - (2) The waiver of a CEMS RA test will be reviewed and may be rescinded at such time, following successful completion of the alternative RA procedure, that the CEMS data indicate that the source emissions are approaching the level. The criterion for reviewing the waiver is the collection of CEMS data showing that emissions have exceeded 70 percent of the applicable standard for seven, consecutive, averaging periods as specified by the applicable regulation(s). For sources subject to standards expressed as control efficiency levels, the criterion for reviewing the waiver is the collection of CEMS data showing that exhaust emissions have exceeded 70 percent of the level needed to meet the control efficiency requirement for seven, consecutive, averaging periods as specified by the applicable regulation(s) [e.g., §§60.45(g) (2) and (3), 60.73(e), and 60.84(e)]. It is the responsibility of the source operator to maintain records and determine the level of emissions relative to the criterion on the waiver of RA testing. If this criterion is exceeded, the owner or operator must notify the Administrator within 10 days of such occurrence and include a description of the nature and cause of

the increasing emissions. The Administrator will review the notification and may rescind the waiver and require the owner or operator to conduct a RA test of the CEMS as specified in Section 8.4 of Performance Specification 2.

§60.14 Modification.

(a) Except as provided under paragraphs (e) and (f) of this section, any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.

(b) Emission rate shall be expressed as kg/hr of any pollutant discharged into the atmosphere for which a standard is applicable. The Administrator shall use the following to determine emission rate:

(1) Emission factors as specified in the latest issue of "Compilation of Air Pollutant Emission Factors," EPA Publication No. AP-42, or other emission factors determined by the Administrator to be superior to AP-42 emission factors, in cases where utilization of emission factors demonstrates that the emission level resulting from the physical or operational change will either clearly increase or clearly not increase.

(2) Material balances, continuous monitor data, or manual emission tests in cases where utilization of emission factors as referenced in paragraph (b)(1) of this section does not demonstrate to the Administrator's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not increase, or where an owner or operator demonstrates to the Administrator's satisfaction that there are reasonable grounds to dispute the result obtained by the Administrator utilizing emission factors as referenced in paragraph (b)(1) of this section. When the emission rate is based on results from manual emission tests or continuous monitoring systems, the procedures specified in appendix C of this part shall be used to determine whether an increase in emission rate has occurred. Tests shall be conducted under such conditions as the Administrator shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.

(c) The addition of an affected facility to a stationary source as an expansion to that source or as a replacement for an existing facility shall not by itself bring within the applicability of this part any other facility within that source.

(d) [Reserved]

(e) The following shall not, by themselves, be considered modifications under this part:

(1) Maintenance, repair, and replacement which the Administrator determines to be routine for a source category, subject to the provisions of paragraph (c) of this section and §60.15.

(2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.

(3) An increase in the hours of operation.

(4) Use of an alternative fuel or raw material if, prior to the date any standard under this part becomes applicable to that source type, as provided by §60.1, the existing facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if that use could be accomplished under the facility's construction specifications as amended prior to the change. Conversion to coal required for energy considerations, as specified in section 111(a)(8) of the Act, shall not be considered a modification.

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 645 of 672

(5) The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.

(6) The relocation or change in ownership of an existing facility.

(f) Special provisions set forth under an applicable subpart of this part shall supersede any conflicting provisions of this section.

(g) Within 180 days of the completion of any physical or operational change subject to the control measures specified in paragraph (a) of this section, compliance with all applicable standards must be achieved.

(h) No physical change, or change in the method of operation, at an existing electric utility steam generating unit shall be treated as a modification for the purposes of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the 5 years prior to the change.

(i) Repowering projects that are awarded funding from the Department of Energy as permanent clean coal technology demonstration projects (or similar projects funded by EPA) are exempt from the requirements of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the five years prior to the change.

(j)(1) Repowering projects that qualify for an extension under section 409(b) of the Clean Air Act are exempt from the requirements of this section, provided that such change does not increase the actual hourly emissions of any pollutant regulated under this section above the actual hourly emissions achievable at that unit during the 5 years prior to the change.

(2) This exemption shall not apply to any new unit that:

(i) Is designated as a replacement for an existing unit;

(ii) Qualifies under section 409(b) of the Clean Air Act for an extension of an emission limitation compliance date under section 405 of the Clean Air Act; and

(iii) Is located at a different site than the existing unit.

(k) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project is exempt from the requirements of this section. A *temporary clean coal control technology demonstration project*, for the purposes of this section is a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State implementation plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.

(l) The reactivation of a very clean coal-fired electric utility steam generating unit is exempt from the requirements of this section.

§60.15 Reconstruction.

(a) An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate.

(b) "Reconstruction" means the replacement of components of an existing facility to such an extent that:

(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and

(2) It is technologically and economically feasible to meet the applicable standards set forth in this part.

- (c) "Fixed capital cost" means the capital needed to provide all the depreciable components.
- (d) If an owner or operator of an existing facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, he shall notify the Administrator of the proposed replacements. The notice must be postmarked 60 days (or as soon as practicable) before construction of the replacements is commenced and must include the following information:
- (1) Name and address of the owner or operator.
 - (2) The location of the existing facility.
 - (3) A brief description of the existing facility and the components which are to be replaced.
 - (4) A description of the existing air pollution control equipment and the proposed air pollution control equipment.
 - (5) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility.
 - (6) The estimated life of the existing facility after the replacements.
 - (7) A discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.
- (e) The Administrator will determine, within 30 days of the receipt of the notice required by paragraph (d) of this section and any additional information he may reasonably require, whether the proposed replacement constitutes reconstruction.
- (f) The Administrator's determination under paragraph (e) shall be based on:
- (1) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new facility;
 - (2) The estimated life of the facility after the replacements compared to the life of a comparable entirely new facility;
 - (3) The extent to which the components being replaced cause or contribute to the emissions from the facility; and
 - (4) Any economic or technical limitations on compliance with applicable standards of performance which are inherent in the proposed replacements.
- (g) Individual subparts of this part may include specific provisions which refine and delimit the concept of reconstruction set forth in this section.

§60.16 Priority list.

Prioritized Major Source Categories

<i>Priority Number¹</i>	<i>Source Category</i>
1.	Synthetic Organic Chemical Manufacturing Industry (SOCMI) and Volatile Organic Liquid Storage Vessels and Handling Equipment
	(a) SOCMI unit processes
	(b) Volatile organic liquid (VOL) storage vessels and handling equipment

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 647 of 672

	(c) SOCOMI fugitive sources
	(d) SOCOMI secondary sources
2.	Industrial Surface Coating: Cans
3.	Petroleum Refineries: Fugitive Sources
4.	Industrial Surface Coating: Paper
5.	Dry Cleaning
	(a) Perchloroethylene
	(b) Petroleum solvent
6.	Graphic Arts
7.	Polymers and Resins: Acrylic Resins
8.	Mineral Wool (Deleted)
9.	Stationary Internal Combustion Engines
10.	Industrial Surface Coating: Fabric
11.	Industrial-Commercial-Institutional Steam Generating Units.
12.	Incineration: Non-Municipal (Deleted)
13.	Non-Metallic Mineral Processing
14.	Metallic Mineral Processing
15.	Secondary Copper (Deleted)
16.	Phosphate Rock Preparation
17.	Foundries: Steel and Gray Iron
18.	Polymers and Resins: Polyethylene
19.	Charcoal Production
20.	Synthetic Rubber
	(a) Tire manufacture
	(b) SBR production
21.	Vegetable Oil
22.	Industrial Surface Coating: Metal Coil
23.	Petroleum Transportation and Marketing
24.	By-Product Coke Ovens

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 648 of 672

25.	Synthetic Fibers
26.	Plywood Manufacture
27.	Industrial Surface Coating: Automobiles
28.	Industrial Surface Coating: Large Appliances
29.	Crude Oil and Natural Gas Production
30.	Secondary Aluminum
31.	Potash (Deleted)
32.	Lightweight Aggregate Industry: Clay, Shale, and Slate ²
33.	Glass
34.	Gypsum
35.	Sodium Carbonate
36.	Secondary Zinc (Deleted)
37.	Polymers and Resins: Phenolic
38.	Polymers and Resins: Urea-Melamine
39.	Ammonia (Deleted)
40.	Polymers and Resins: Polystyrene
41.	Polymers and Resins: ABS-SAN Resins
42.	Fiberglass
43.	Polymers and Resins: Polypropylene
44.	Textile Processing
45.	Asphalt Processing and Asphalt Roofing Manufacture
46.	Brick and Related Clay Products
47.	Ceramic Clay Manufacturing (Deleted)
48.	Ammonium Nitrate Fertilizer
49.	Castable Refractories (Deleted)
50.	Borax and Boric Acid (Deleted)
51.	Polymers and Resins: Polyester Resins
52.	Ammonium Sulfate
53.	Starch

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 649 of 672

54.	Perlite
55.	Phosphoric Acid: Thermal Process (Deleted)
56.	Uranium Refining
57.	Animal Feed Defluorination (Deleted)
58.	Urea (for fertilizer and polymers)
59.	Detergent (Deleted)
<i>Other Source Categories</i>	
Lead acid battery manufacture ³	
Organic solvent cleaning ³	
Industrial surface coating: metal furniture ³	
Stationary gas turbines ⁴	
Municipal solid waste landfills ⁴	

¹Low numbers have highest priority, e.g., No. 1 is high priority, No. 59 is low priority.

²Formerly titled "Sintering: Clay and Fly Ash".

³Minor source category, but included on list since an NSPS is being developed for that source category.

⁴Not prioritized, since an NSPS for this major source category has already been promulgated.

§60.17 Incorporations by reference.

(a) Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the EPA must publish notice of change in the FEDERAL REGISTER and the material must be available to the public. All approved material is available for inspection at the EPA Docket Center, Public Reading Room, EPA WJC West, Room 3334, 1301 Constitution Ave. NW., Washington, DC, telephone number 202-566-1744, and is available from the sources listed below. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(b) American Gas Association, available through ILI Infodisk, 610 Winters Avenue, Paramus, New Jersey 07652:

- (1) American Gas Association Report No. 3: Orifice Metering for Natural Gas and Other Related Hydrocarbon Fluids, Part 1: General Equations and Uncertainty Guidelines (1990), IBR approved for §60.107a(d).
- (2) American Gas Association Report No. 3: Orifice Metering for Natural Gas and Other Related Hydrocarbon Fluids, Part 2: Specification and Installation Requirements (2000), IBR approved for §60.107a(d).
- (3) American Gas Association Report No. 11: Measurement of Natural Gas by Coriolis Meter (2003), IBR approved for §60.107a(d).
- (4) American Gas Association Transmission Measurement Committee Report No. 7: Measurement of Gas by Turbine Meters (Revised February 2006), IBR approved for §60.107a(d).

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 650 of 672

(c) American Hospital Association (AHA) Service, Inc., Post Office Box 92683, Chicago, Illinois 60675-2683. You may inspect a copy at the EPA's Air and Radiation Docket and Information Center (Docket A-91-61, Item IV-J-124), Room M-1500, 1200 Pennsylvania Ave. NW., Washington, DC 20460.

(1) An Ounce of Prevention: Waste Reduction Strategies for Health Care Facilities. American Society for Health Care Environmental Services of the American Hospital Association. Chicago, Illinois. 1993. AHA Catalog No. 057007. ISBN 0-87258-673-5. IBR approved for §§60.35e and 60.55c.

(2) [Reserved]

(d) The following material is available for purchase from the American National Standards Institute (ANSI), 25 W. 43rd Street, 4th Floor, New York, NY 10036, Telephone (212) 642-4980, and is also available at the following Web site: <http://www.ansi.org>.

(1) ANSI No. C12.20-2010 American National Standard for Electricity Meters—0.2 and 0.5 Accuracy Classes (Approved August 31, 2010), IBR approved for §60.5535(d).

(2) [Reserved]

(e) American Petroleum Institute (API), 1220 L Street NW., Washington, DC 20005.

(1) API Publication 2517, Evaporation Loss from External Floating Roof Tanks, Second Edition, February 1980, IBR approved for §§60.111(i), 60.111a(f), and 60.116b(e).

(2) API Manual of Petroleum Measurement Standards, Chapter 22—Testing Protocol, Section 2—Differential Pressure Flow Measurement Devices, First Edition, August 2005, IBR approved for §60.107a(d).

(f) American Public Health Association, 1015 18th Street NW., Washington, DC 20036.

(1) "Standard Methods for the Examination of Water and Wastewater," 16th edition, 1985. Method 303F: "Determination of Mercury by the Cold Vapor Technique." Incorporated by reference for appendix A-8 to part 60, Method 29, §§9.2.3, 10.3, and 11.1.3.

(2) 2540 G. Total, Fixed, and Volatile Solids in Solid and Semisolid Samples, in Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998, IBR approved for §60.154(b).

(g) The following material is available for purchase from the American Society of Mechanical Engineers (ASME), Two Park Avenue, New York, NY 10016-5990, Telephone (800) 843-2763, and is also available at the following Web site: <http://www.asme.org>.

(1) ASME Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters, 6th Edition (1971), IBR approved for §§60.58a(h), 60.58b(i), 60.1320(a), and 60.1810(a).

(2) ASME MFC-3M-2004, Measurement of Fluid Flow in Pipes Using Orifice, Nozzle, and Venturi, IBR approved for §60.107a(d).

(3) ASME/ANSI MFC-4M-1986 (Reaffirmed 2008), Measurement of Gas Flow by Turbine Meters, IBR approved for §60.107a(d).

(4) ASME/ANSI MFC-5M-1985 (Reaffirmed 2006), Measurement of Liquid Flow in Closed Conduits Using Transit-Time Ultrasonic Flowmeters, IBR approved for §60.107a(d).

(5) ASME MFC-6M-1998 (Reaffirmed 2005), Measurement of Fluid Flow in Pipes Using Vortex Flowmeters, IBR approved for §60.107a(d).

(6) ASME/ANSI MFC-7M-1987 (Reaffirmed 2006), Measurement of Gas Flow by Means of Critical Flow Venturi Nozzles, IBR approved for §60.107a(d).

- (7) ASME/ANSI MFC-9M-1988 (Reaffirmed 2006), Measurement of Liquid Flow in Closed Conduits by Weighing Method, IBR approved for §60.107a(d).
 - (8) ASME MFC-11M-2006, Measurement of Fluid Flow by Means of Coriolis Mass Flowmeters, IBR approved for §60.107a(d).
 - (9) ASME MFC-14M-2003, Measurement of Fluid Flow Using Small Bore Precision Orifice Meters, IBR approved for §60.107a(d).
 - (10) ASME MFC-16-2007, Measurement of Liquid Flow in Closed Conduits with Electromagnetic Flowmeters, IBR approved for §60.107a(d).
 - (11) ASME MFC-18M-2001, Measurement of Fluid Flow Using Variable Area Meters, IBR approved for §60.107a(d).
 - (12) ASME MFC-22-2007, Measurement of Liquid by Turbine Flowmeters, IBR approved for §60.107a(d).
 - (13) ASME PTC 4.1-1964 (Reaffirmed 1991), Power Test Codes: Test Code for Steam Generating Units (with 1968 and 1969 Addenda), IBR approved for §§60.46b, 60.58a(h), 60.58b(i), 60.1320(a), and 60.1810(a).
 - (14) ASME/ANSI PTC 19.10-1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus], (Issued August 31, 1981), IBR approved for §§60.56c(b), 60.63(f), 60.106(e), 60.104a(d), (h), (i), and (j), 60.105a(d), (f), and (g), §60.106a(a), §60.107a(a), (c), and (d), tables 1 and 3 to subpart EEEE, tables 2 and 4 to subpart FFFF, table 2 to subpart JJJJ, §60.285a(f), §60.4415(a), 60.2145(s) and (t), 60.2710(s), (t), and (w), 60.2730(q), 60.4900(b), 60.5220(b), tables 1 and 2 to subpart LLLL, tables 2 and 3 to subpart MMMM, 60.5406(c), 60.5406a(c), 60.5407a(g), 60.5413(b), 60.5413a(b) and 60.5413a(d).
 - (15) ASME PTC 22-2014, Gas Turbines: Performance Test Codes, (Issued December 31, 2014), IBR approved for §60.5580.
 - (16) ASME PTC 46-1996, Performance Test Code on Overall Plant Performance, (Issued October 15, 1997), IBR approved for §60.5580.
 - (17) ASME QRO-1-1994, Standard for the Qualification and Certification of Resource Recovery Facility Operators, IBR approved for §§60.54b(a) and (b), 60.56a, 60.1185(a) and (c), and 60.1675(a) and (c).
- (h) The following material is available for purchase from ASTM International, 100 Barr Harbor Drive, P.O. Box CB700, West Conshohocken, Pennsylvania 19428-2959, (800) 262-1373, <http://www.astm.org>.
- (1) ASTM A99-76, Standard Specification for Ferromanganese, IBR approved for §60.261.
 - (2) ASTM A99-82 (Reapproved 1987), Standard Specification for Ferromanganese, IBR approved for §60.261.
 - (3) ASTM A100-69, Standard Specification for Ferrosilicon, IBR approved for §60.261.
 - (4) ASTM A100-74, Standard Specification for Ferrosilicon, IBR approved for §60.261.
 - (5) ASTM A100-93, Standard Specification for Ferrosilicon, IBR approved for §60.261.
 - (6) ASTM A101-73, Standard Specification for Ferrochromium, IBR approved for §60.261.
 - (7) ASTM A101-93, Standard Specification for Ferrochromium, IBR approved for §60.261.
 - (8) ASTM A482-76, Standard Specification for Ferrochromesilicon, IBR approved for §60.261.
 - (9) ASTM A482-93, Standard Specification for Ferrochromesilicon, IBR approved for §60.261.
 - (10) ASTM A483-64, Standard Specification for Silicomanganese, IBR approved for §60.261.
 - (11) ASTM A483-74 (Reapproved 1988), Standard Specification for Silicomanganese, IBR approved for §60.261.

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 652 of 672

- (12) ASTM A495-76, Standard Specification for Calcium-Silicon and Calcium Manganese-Silicon, IBR approved for §60.261.
- (13) ASTM A495-94, Standard Specification for Calcium-Silicon and Calcium Manganese-Silicon, IBR approved for §60.261.
- (14) ASTM D86-78, Distillation of Petroleum Products, IBR approved for §§60.562-2(d), 60.593(d), 60.593a(d), 60.633(h).
- (15) ASTM D86-82, Distillation of Petroleum Products, IBR approved for §§60.562-2(d), 60.593(d), 60.593a(d), 60.633(h).
- (16) ASTM D86-90, Distillation of Petroleum Products, IBR approved for §§60.562-2(d), 60.593(d), 60.593a(d), 60.633(h).
- (17) ASTM D86-93, Distillation of Petroleum Products, IBR approved for §§60.562-2(d), 60.593(d), 60.593a(d), 60.633(h).
- (18) ASTM D86-95, Distillation of Petroleum Products, IBR approved for §§60.562-2(d), 60.593(d), 60.593a(d), 60.633(h).
- (19) ASTM D86-96, Distillation of Petroleum Products, (Approved April 10, 1996), IBR approved for §§60.562-2(d), 60.593(d), 60.593a(d), 60.633(h), 60.5401(f), 60.5401a(f).
- (20) ASTM D129-64, Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), IBR approved for §§60.106(j) and appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.
- (21) ASTM D129-78, Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), IBR approved for §§60.106(j) and appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.
- (22) ASTM D129-95, Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), IBR approved for §§60.106(j) and appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.
- (23) ASTM D129-00, Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), IBR approved for §60.335(b).
- (24) ASTM D129-00 (Reapproved 2005), Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), IBR approved for §60.4415(a).
- (25) ASTM D240-76, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, IBR approved for §§60.46(c), 60.296(b), and appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.
- (26) ASTM D240-92, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, IBR approved for §§60.46(c), 60.296(b), and appendix A-7: Method 19, Section 12.5.2.2.3.
- (27) ASTM D240-02 (Reapproved 2007), Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, (Approved May 1, 2007), IBR approved for §60.107a(d).
- (28) ASTM D270-65, Standard Method of Sampling Petroleum and Petroleum Products, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.2.1.
- (29) ASTM D270-75, Standard Method of Sampling Petroleum and Petroleum Products, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.2.1.
- (30) ASTM D323-82, Test Method for Vapor Pressure of Petroleum Products (Reid Method), IBR approved for §§60.111(l), 60.111a(g), 60.111b, and 60.116b(f).

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 653 of 672

- (31) ASTM D323-94, Test Method for Vapor Pressure of Petroleum Products (Reid Method), IBR approved for §§60.111(l), 60.111a(g), 60.111b, and 60.116b(f).
- (32) ASTM D388-77, Standard Specification for Classification of Coals by Rank, IBR approved for §§60.41, 60.45(f), 60.41Da, 60.41b, 60.41c, and 60.251.
- (33) ASTM D388-90, Standard Specification for Classification of Coals by Rank, IBR approved for §§60.41, 60.45(f), 60.41Da, 60.41b, 60.41c, and 60.251.
- (34) ASTM D388-91, Standard Specification for Classification of Coals by Rank, IBR approved for §§60.41, 60.45(f), 60.41Da, 60.41b, 60.41c, and 60.251.
- (35) ASTM D388-95, Standard Specification for Classification of Coals by Rank, IBR approved for §§60.41, 60.45(f), 60.41Da, 60.41b, 60.41c, and 60.251.
- (36) ASTM D388-98a, Standard Specification for Classification of Coals by Rank, IBR approved for §§60.41, 60.45(f), 60.41Da, 60.41b, 60.41c, and 60.251.
- (37) ASTM D388-99 (Reapproved 2004)^{e1} Standard Classification of Coals by Rank, IBR approved for §§60.41, 60.45(f), 60.41Da, 60.41b, 60.41c, 60.251, and 60.5580.
- (38) ASTM D396-78, Standard Specification for Fuel Oils, IBR approved for §§60.41b, 60.41c, 60.111(b), and 60.111a(b).
- (39) ASTM D396-89, Standard Specification for Fuel Oils, IBR approved for §§60.41b, 60.41c, 60.111(b), and 60.111a(b).
- (40) ASTM D396-90, Standard Specification for Fuel Oils, IBR approved for §§60.41b, 60.41c, 60.111(b), and 60.111a(b).
- (41) ASTM D396-92, Standard Specification for Fuel Oils, IBR approved for §§60.41b, 60.41c, 60.111(b), and 60.111a(b).
- (42) ASTM D396-98, Standard Specification for Fuel Oils, IBR approved for §§60.41b, 60.41c, 60.111(b), 60.111a(b), and 60.5580.
- (43) ASTM D975-78, Standard Specification for Diesel Fuel Oils, IBR approved for §§60.111(b) and 60.111a(b).
- (44) ASTM D975-96, Standard Specification for Diesel Fuel Oils, IBR approved for §§60.111(b) and 60.111a(b).
- (45) ASTM D975-98a, Standard Specification for Diesel Fuel Oils, IBR approved for §§60.111(b) and 60.111a(b).
- (46) ASTM D975-08a, Standard Specification for Diesel Fuel Oils, IBR approved for §§60.41b, 60.41c, and 60.5580.
- (47) ASTM D1072-80, Standard Test Method for Total Sulfur in Fuel Gases, IBR approved for §60.335(b).
- (48) ASTM D1072-90 (Reapproved 1994), Standard Test Method for Total Sulfur in Fuel Gases, IBR approved for §60.335(b).
- (49) ASTM D1072-90 (Reapproved 1999), Standard Test Method for Total Sulfur in Fuel Gases, IBR approved for §60.4415(a).
- (50) ASTM D1137-53, Standard Method for Analysis of Natural Gases and Related Types of Gaseous Mixtures by the Mass Spectrometer, IBR approved for §60.45(f).
- (51) ASTM D1137-75, Standard Method for Analysis of Natural Gases and Related Types of Gaseous Mixtures by the Mass Spectrometer, IBR approved for §60.45(f).

(52) ASTM D1193-77, Standard Specification for Reagent Water, IBR approved for appendix A-3 to part 60: Method 5, Section 7.1.3; Method 5E, Section 7.2.1; Method 5F, Section 7.2.1; appendix A-4 to part 60: Method 6, Section 7.1.1; Method 7, Section 7.1.1; Method 7C, Section 7.1.1; Method 7D, Section 7.1.1; Method 10A, Section 7.1.1; appendix A-5 to part 60: Method 11, Section 7.1.3; Method 12, Section 7.1.3; Method 13A, Section 7.1.2; appendix A-8 to part 60: Method 26, Section 7.1.2; Method 26A, Section 7.1.2; and Method 29, Section 7.2.2.

(53) ASTM D1193-91, Standard Specification for Reagent Water, IBR approved for appendix A-3 to part 60: Method 5, Section 7.1.3; Method 5E, Section 7.2.1; Method 5F, Section 7.2.1; appendix A-4 to part 60: Method 6, Section 7.1.1; Method 7, Section 7.1.1; Method 7C, Section 7.1.1; Method 7D, Section 7.1.1; Method 10A, Section 7.1.1; appendix A-5 to part 60: Method 11, Section 7.1.3; Method 12, Section 7.1.3; Method 13A, Section 7.1.2; appendix A-8 to part 60: Method 26, Section 7.1.2; Method 26A, Section 7.1.2; and Method 29, Section 7.2.2.

(54) ASTM D1266-87, Standard Test Method for Sulfur in Petroleum Products (Lamp Method), IBR approved for §§60.106(j) and 60.335(b).

(55) ASTM D1266-91, Standard Test Method for Sulfur in Petroleum Products (Lamp Method), IBR approved for §§60.106(j) and 60.335(b).

(56) ASTM D1266-98, Standard Test Method for Sulfur in Petroleum Products (Lamp Method), IBR approved for §§60.106(j) and 60.335(b).

(57) ASTM D1266-98 (Reapproved 2003)^e1 Standard Test Method for Sulfur in Petroleum Products (Lamp Method), IBR approved for §60.4415(a).

(58) ASTM D1475-60 (Reapproved 1980), Standard Test Method for Density of Paint, Varnish Lacquer, and Related Products, IBR approved for §60.435(d), appendix A-8 to part 60: Method 24, Section 6.1; and Method 24A, Sections 6.5 and 7.1.

(59) ASTM D1475-90, Standard Test Method for Density of Paint, Varnish Lacquer, and Related Products, IBR approved for §60.435(d), appendix A-8 to part 60: Method 24, Section 6.1; and Method 24A, §§6.5 and 7.1.

(60) ASTM D1552-83, Standard Test Method for Sulfur in Petroleum Products (High-Temperature Method), IBR approved for §§60.106(j), 60.335(b), and appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.

(61) ASTM D1552-95, Standard Test Method for Sulfur in Petroleum Products (High-Temperature Method), IBR approved for §§60.106(j), 60.335(b), and appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.

(62) ASTM D1552-01, Standard Test Method for Sulfur in Petroleum Products (High-Temperature Method), IBR approved for §§60.106(j), 60.335(b), and appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.

(63) ASTM D1552-03, Standard Test Method for Sulfur in Petroleum Products (High-Temperature Method), IBR approved for §60.4415(a).

(64) ASTM D1826-77, Standard Test Method for Calorific Value of Gases in Natural Gas Range by Continuous Recording Calorimeter, IBR approved for §§60.45(f), 60.46(c), 60.296(b), and appendix A-7 to part 60: Method 19, Section 12.3.2.4.

(65) ASTM D1826-94, Standard Test Method for Calorific Value of Gases in Natural Gas Range by Continuous Recording Calorimeter, IBR approved for §§60.45(f), 60.46(c), 60.296(b), and appendix A-7 to part 60: Method 19, Section 12.3.2.4.

(66) ASTM D1826-94 (Reapproved 2003), Standard Test Method for Calorific (Heating) Value of Gases in Natural Gas Range by Continuous Recording Calorimeter, (Approved May 10, 2003), IBR approved for §60.107a(d).

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 655 of 672

- (67) ASTM D1835-87, Standard Specification for Liquefied Petroleum (LP) Gases, IBR approved for §§60.41Da, 60.41b, and 60.41c.
- (68) ASTM D1835-91, Standard Specification for Liquefied Petroleum (LP) Gases, IBR approved for §§60.41Da, 60.41b, and 60.41c.
- (69) ASTM D1835-97, Standard Specification for Liquefied Petroleum (LP) Gases, IBR approved for §§60.41Da, 60.41b, and 60.41c.
- (70) ASTM D1835-03a, Standard Specification for Liquefied Petroleum (LP) Gases, IBR approved for §§60.41Da, 60.41b, and 60.41c.
- (71) ASTM D1945-64, Standard Method for Analysis of Natural Gas by Gas Chromatography, IBR approved for §60.45(f).
- (72) ASTM D1945-76, Standard Method for Analysis of Natural Gas by Gas Chromatography, IBR approved for §60.45(f).
- (73) ASTM D1945-91, Standard Method for Analysis of Natural Gas by Gas Chromatography, IBR approved for §60.45(f).
- (74) ASTM D1945-96, Standard Method for Analysis of Natural Gas by Gas Chromatography, IBR approved for §60.45(f).
- (75) ASTM D1945-03 (Reapproved 2010), Standard Method for Analysis of Natural Gas by Gas Chromatography, (Approved January 1, 2010), IBR approved for §§60.107a(d), 60.5413(d), 60.5413a(d).
- (76) ASTM D1946-77, Standard Method for Analysis of Reformed Gas by Gas Chromatography, IBR approved for §§60.18(f), 60.45(f), 60.564(f), 60.614(e), 60.664(e), and 60.704(d).
- (77) ASTM D1946-90 (Reapproved 1994), Standard Method for Analysis of Reformed Gas by Gas Chromatography, IBR approved for §§60.18(f), 60.45(f), 60.564(f), 60.614(e), 60.664(e), and 60.704(d).
- (78) ASTM D1946-90 (Reapproved 2006), Standard Method for Analysis of Reformed Gas by Gas Chromatography, (Approved June 1, 2006), IBR approved for §60.107a(d).
- (79) ASTM D2013-72, Standard Method of Preparing Coal Samples for Analysis, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.
- (80) ASTM D2013-86, Standard Method of Preparing Coal Samples for Analysis, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.
- (81) ASTM D2015-77 (Reapproved 1978), Standard Test Method for Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter, IBR approved for §§60.45(f), 60.46(c), and appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.
- (82) ASTM D2015-96, Standard Test Method for Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter, IBR approved for §§60.45(f), 60.46(c), and appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.
- (83) ASTM D2016-74, Standard Test Methods for Moisture Content of Wood, IBR approved for appendix A-8 to part 60: Method 28, Section 16.1.1.
- (84) ASTM D2016-83, Standard Test Methods for Moisture Content of Wood, IBR approved for appendix A-8 to part 60: Method 28, Section 16.1.1.
- (85) ASTM D2234-76, Standard Methods for Collection of a Gross Sample of Coal, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.1.

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 656 of 672

(86) ASTM D2234-96, Standard Methods for Collection of a Gross Sample of Coal, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.1.

(87) ASTM D2234-97b, Standard Methods for Collection of a Gross Sample of Coal, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.1.

(88) ASTM D2234-98, Standard Methods for Collection of a Gross Sample of Coal, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.1.

(89) ASTM D2369-81, Standard Test Method for Volatile Content of Coatings, IBR approved for appendix A-8 to part 60: Method 24, Section 6.2.

(90) ASTM D2369-87, Standard Test Method for Volatile Content of Coatings, IBR approved for appendix A-8 to part 60: Method 24, Section 6.2.

(91) ASTM D2369-90, Standard Test Method for Volatile Content of Coatings, IBR approved for appendix A-8 to part 60: Method 24, Section 6.2.

(92) ASTM D2369-92, Standard Test Method for Volatile Content of Coatings, IBR approved for appendix A-8 to part 60: Method 24, Section 6.2.

(93) ASTM D2369-93, Standard Test Method for Volatile Content of Coatings, IBR approved for appendix A-8 to part 60: Method 24, Section 6.2.

(94) ASTM D2369-95, Standard Test Method for Volatile Content of Coatings, IBR approved for appendix A-8 to part 60: Method 24, Section 6.2.

(95) ASTM D2382-76, Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method), IBR approved for §§60.18(f), 60.485(g), 60.485a(g), 60.564(f), 60.614(e), 60.664(e), and 60.704(d).

(96) ASTM D2382-88, Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method), IBR approved for §§60.18(f), 60.485(g), 60.485a(g), 60.564(f), 60.614(e), 60.664(e), and 60.704(d).

(97) ASTM D2504-67, Noncondensable Gases in C3 and Lighter Hydrocarbon Products by Gas Chromatography, IBR approved for §§60.485(g) and 60.485a(g).

(98) ASTM D2504-77, Noncondensable Gases in C3 and Lighter Hydrocarbon Products by Gas Chromatography, IBR approved for §§60.485(g) and 60.485a(g).

(99) ASTM D2504-88 (Reapproved 1993), Noncondensable Gases in C3 and Lighter Hydrocarbon Products by Gas Chromatography, IBR approved for §§60.485(g) and 60.485a(g).

(100) ASTM D2584-68 (Reapproved 1985), Standard Test Method for Ignition Loss of Cured Reinforced Resins, IBR approved for §60.685(c).

(101) ASTM D2584-94, Standard Test Method for Ignition Loss of Cured Reinforced Resins, IBR approved for §60.685(c).

(102) ASTM D2597-94 (Reapproved 1999), Standard Test Method for Analysis of Demethanized Hydrocarbon Liquid Mixtures Containing Nitrogen and Carbon Dioxide by Gas Chromatography, IBR approved for §60.335(b).

(103) ASTM D2622-87, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry, IBR approved for §§60.106(j) and 60.335(b).

(104) ASTM D2622-94, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry, IBR approved for §§60.106(j) and 60.335(b).

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 657 of 672

(105) ASTM D2622-98, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry, IBR approved for §§60.106(j) and 60.335(b).

(106) ASTM D2622-05, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry, IBR approved for §60.4415(a).

(107) ASTM D2879-83 Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, IBR approved for §§60.111b(f)(3), 60.116b(e), 60.116b(f), 60.485(e), and 60.485a(e).

(108) ASTM D2879-96, Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, IBR approved for §§60.111b(f)(3), 60.116b(e), 60.116b(f), 60.485(e), and 60.485a(e).

(109) ASTM D2879-97, Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, IBR approved for §§60.111b(f)(3), 60.116b(e), 60.116b(f), 60.485(e), and 60.485a(e).

(110) ASTM D2880-78, Standard Specification for Gas Turbine Fuel Oils, IBR approved for §§60.111(b), 60.111a(b), and 60.335(d).

(111) ASTM D2880-96, Standard Specification for Gas Turbine Fuel Oils, IBR approved for §§60.111(b), 60.111a(b), and 60.335(d).

(112) ASTM D2908-74, Standard Practice for Measuring Volatile Organic Matter in Water by Aqueous-Injection Gas Chromatography, IBR approved for §60.564(j).

(113) ASTM D2908-91, Standard Practice for Measuring Volatile Organic Matter in Water by Aqueous-Injection Gas Chromatography, IBR approved for §60.564(j).

(114) ASTM D2986-71, Standard Method for Evaluation of Air, Assay Media by the Monodisperse DOP (Diethyl Phthalate) Smoke Test, IBR approved for appendix A-3 to part 60: Method 5, Section 7.1.1; appendix A-5 to part 60: Method 12, Section 7.1.1; and Method 13A, Section 7.1.1.2.

(115) ASTM D2986-78, Standard Method for Evaluation of Air, Assay Media by the Monodisperse DOP (Diethyl Phthalate) Smoke Test, IBR approved for appendix A-3 to part 60: Method 5, Section 7.1.1; appendix A-5 to part 60: Method 12, Section 7.1.1; and Method 13A, Section 7.1.1.2.

(116) ASTM D2986-95a, Standard Method for Evaluation of Air, Assay Media by the Monodisperse DOP (Diethyl Phthalate) Smoke Test, IBR approved for appendix A-3 to part 60: Method 5, Section 7.1.1; appendix A-5 to part 60: Method 12, Section 7.1.1; and Method 13A, Section 7.1.1.2.

(117) ASTM D3173-73, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(118) ASTM D3173-87, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(119) ASTM D3176-74, Standard Method for Ultimate Analysis of Coal and Coke, IBR approved for §60.45(f)(5)(i) and appendix A-7 to part 60: Method 19, Section 12.3.2.3.

(120) ASTM D3176-89, Standard Method for Ultimate Analysis of Coal and Coke, IBR approved for §60.45(f)(5)(i) and appendix A-7 to part 60: Method 19, Section 12.3.2.3.

(121) ASTM D3177-75, Standard Test Method for Total Sulfur in the Analysis Sample of Coal and Coke, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 658 of 672

- (122) ASTM D3177-89, Standard Test Method for Total Sulfur in the Analysis Sample of Coal and Coke, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.
- (123) ASTM D3178-73 (Reapproved 1979), Standard Test Methods for Carbon and Hydrogen in the Analysis Sample of Coal and Coke, IBR approved for §60.45(f).
- (124) ASTM D3178-89, Standard Test Methods for Carbon and Hydrogen in the Analysis Sample of Coal and Coke, IBR approved for §60.45(f).
- (125) ASTM D3246-81, Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry, IBR approved for §60.335(b).
- (126) ASTM D3246-92, Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry, IBR approved for §60.335(b).
- (127) ASTM D3246-96, Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry, IBR approved for §60.335(b).
- (128) ASTM D3246-05, Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry, IBR approved for §60.4415(a)(1).
- (129) ASTM D3270-73T, Standard Test Methods for Analysis for Fluoride Content of the Atmosphere and Plant Tissues (Semiautomated Method), IBR approved for appendix A-5 to part 60: Method 13A, Section 16.1.
- (130) ASTM D3270-80, Standard Test Methods for Analysis for Fluoride Content of the Atmosphere and Plant Tissues (Semiautomated Method), IBR approved for appendix A-5 to part 60: Method 13A, Section 16.1.
- (131) ASTM D3270-91, Standard Test Methods for Analysis for Fluoride Content of the Atmosphere and Plant Tissues (Semiautomated Method), IBR approved for appendix A-5 to part 60: Method 13A, Section 16.1.
- (132) ASTM D3270-95, Standard Test Methods for Analysis for Fluoride Content of the Atmosphere and Plant Tissues (Semiautomated Method), IBR approved for appendix A-5 to part 60: Method 13A, Section 16.1.
- (133) ASTM D3286-85, Standard Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.
- (134) ASTM D3286-96, Standard Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.
- (135) ASTM D3370-76, Standard Practices for Sampling Water, IBR approved for §60.564(j).
- (136) ASTM D3370-95a, Standard Practices for Sampling Water, IBR approved for §60.564(j).
- (137) ASTM D3588-98 (Reapproved 2003), Standard Practice for Calculating Heat Value, Compressibility Factor, and Relative Density of Gaseous Fuels, (Approved May 10, 2003), IBR approved for §§60.107a(d), 60.5413(d), and 60.5413a(d).
- (138) ASTM D3699-08, Standard Specification for Kerosine, including Appendix X1, (Approved September 1, 2008), IBR approved for §§60.41b, 60.41c, and 60.5580.
- (139) ASTM D3792-79, Standard Test Method for Water Content of Water-Reducible Paints by Direct Injection into a Gas Chromatograph, IBR approved for appendix A-7 to part 60: Method 24, Section 6.3.
- (140) ASTM D3792-91, Standard Test Method for Water Content of Water-Reducible Paints by Direct Injection into a Gas Chromatograph, IBR approved for appendix A-7 to part 60: Method 24, Section 6.3.
- (141) ASTM D4017-81, Standard Test Method for Water in Paints and Paint Materials by the Karl Fischer Titration Method, IBR approved for appendix A-7 to part 60: Method 24, Section 6.4.

Permit Issued: [month day, year]

Permit Expires: [month day, year]

12300341-101

Page 659 of 672

- (142) ASTM D4017-90, Standard Test Method for Water in Paints and Paint Materials by the Karl Fischer Titration Method, IBR approved for appendix A-7 to part 60: Method 24, Section 6.4.
- (143) ASTM D4017-96a, Standard Test Method for Water in Paints and Paint Materials by the Karl Fischer Titration Method, IBR approved for appendix A-7 to part 60: Method 24, Section 6.4.
- (144) ASTM D4057-81, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.
- (145) ASTM D4057-95, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.2.3.
- (146) ASTM D4057-95 (Reapproved 2000), Standard Practice for Manual Sampling of Petroleum and Petroleum Products, IBR approved for §60.4415(a).
- (147) ASTM D4084-82, Standard Test Method for Analysis of Hydrogen Sulfide in Gaseous Fuels (Lead Acetate Reaction Rate Method), IBR approved for §60.334(h).
- (148) ASTM D4084-94, Standard Test Method for Analysis of Hydrogen Sulfide in Gaseous Fuels (Lead Acetate Reaction Rate Method), IBR approved for §60.334(h).
- (149) ASTM D4084-05, Standard Test Method for Analysis of Hydrogen Sulfide in Gaseous Fuels (Lead Acetate Reaction Rate Method), IBR approved for §§60.4360 and 60.4415(a).
- (150) ASTM D4177-95, Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.2.1.
- (151) ASTM D4177-95 (Reapproved 2000), Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, IBR approved for §60.4415(a).
- (152) ASTM D4239-85, Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.
- (153) ASTM D4239-94, Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.
- (154) ASTM D4239-97, Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods, IBR approved for appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.
- (155) ASTM D4294-02, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, IBR approved for §60.335(b).
- (156) ASTM D4294-03, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, IBR approved for §60.4415(a).
- (157) ASTM D4442-84, Standard Test Methods for Direct Moisture Content Measurement in Wood and Wood-base Materials, IBR approved for appendix A-8 to part 60: Method 28, Section 16.1.1.
- (158) ASTM D4442-92, Standard Test Methods for Direct Moisture Content Measurement in Wood and Wood-base Materials, IBR approved for appendix A-8 to part 60: Method 28, Section 16.1.1.
- (159) ASTM D4444-92, Standard Test Methods for Use and Calibration of Hand-Held Moisture Meters, IBR approved for appendix A-8 to part 60: Method 28, Section 16.1.1.

(160) ASTM D4457-85 (Reapproved 1991), Test Method for Determination of Dichloromethane and 1,1,1-Trichloroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph, IBR approved for appendix A-7 to part 60: Method 24, Section 6.5.

(161) ASTM D4468-85 (Reapproved 2000), Standard Test Method for Total Sulfur in Gaseous Fuels by Hydrogenolysis and Rateometric Colorimetry, IBR approved for §§60.335(b) and 60.4415(a).

(162) ASTM D4468-85 (Reapproved 2006), Standard Test Method for Total Sulfur in Gaseous Fuels by Hydrogenolysis and Rateometric Colorimetry, (Approved June 1, 2006), IBR approved for §60.107a(e).

(163) ASTM D4629-02, Standard Test Method for Trace Nitrogen in Liquid Petroleum Hydrocarbons by Syringe/Inlet Oxidative Combustion and Chemiluminescence Detection, IBR approved for §§60.49b(e) and 60.335(b).

(164) ASTM D4809-95, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method), IBR approved for §§60.18(f), 60.485(g), 60.485a(g), 60.564(f), 60.614(d), 60.664(e), and 60.704(d).

(165) ASTM D4809-06, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method), (Approved December 1, 2006), IBR approved for §60.107a(d).

(166) ASTM D4810-88 (Reapproved 1999), Standard Test Method for Hydrogen Sulfide in Natural Gas Using Length of Stain Detector Tubes, IBR approved for §§60.4360 and 60.4415(a).

(167) ASTM D4891-89 (Reapproved 2006) Standard Test Method for Heating Value of Gases in Natural Gas Range by Stoichiometric Combustion, (Approved June 1, 2006), IBR approved for §§60.107a(d), 60.5413(d), and 60.5413a(d).

(168) ASTM D5287-97 (Reapproved 2002), Standard Practice for Automatic Sampling of Gaseous Fuels, IBR approved for §60.4415(a).

(169) ASTM D5403-93, Standard Test Methods for Volatile Content of Radiation Curable Materials, IBR approved for appendix A-7 to part 60: Method 24, Section 6.6.

(170) ASTM D5453-00, Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Motor Fuels and Oils by Ultraviolet Fluorescence, IBR approved for §60.335(b).

(171) ASTM D5453-05, Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Motor Fuels and Oils by Ultraviolet Fluorescence, IBR approved for §60.4415(a).

(172) ASTM D5504-01, Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence, IBR approved for §§60.334(h) and 60.4360.

(173) ASTM D5504-08, Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence, (Approved June 15, 2008), IBR approved for §§60.107a(e) and 60.5413(d).

(174) ASTM D5762-02, Standard Test Method for Nitrogen in Petroleum and Petroleum Products by Boat-Inlet Chemiluminescence, IBR approved for §60.335(b).

(175) ASTM D5865-98, Standard Test Method for Gross Calorific Value of Coal and Coke, IBR approved for §§60.45(f) and 60.46(c), and appendix A-7 to part 60: Method 19, Section 12.5.2.1.3.

(176) ASTM D5865-10, Standard Test Method for Gross Calorific Value of Coal and Coke, (Approved January 1, 2010), IBR approved for §§60.45(f), 60.46(c), and appendix A-7 to part 60: Method 19, section 12.5.2.1.3.

- (177) ASTM D6216-98, Standard Practice for Opacity Monitor Manufacturers to Certify Conformance with Design and Performance Specifications, IBR approved for appendix B to part 60: Performance Specification 1.
- (178) ASTM D6228-98, Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Flame Photometric Detection, IBR approved for §60.334(h).
- (179) ASTM D6228-98 (Reapproved 2003), Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Flame Photometric Detection, IBR approved for §§60.4360 and 60.4415.
- (180) ASTM D6348-03, Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, (Approved October 1, 2003), IBR approved for §60.73a(b), table 7 to subpart IIII, table 2 to subpart JJJJ, and §60.4245(d).
- (181) ASTM D6366-99, Standard Test Method for Total Trace Nitrogen and Its Derivatives in Liquid Aromatic Hydrocarbons by Oxidative Combustion and Electrochemical Detection, IBR approved for §60.335(b)(9).
- (182) ASTM D6420-99 (Reapproved 2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, (Approved October 1, 2004), IBR approved for §60.107a(d) and table 2 to subpart JJJJ.
- (183) ASTM D6522-00, Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers, IBR approved for §60.335(a).
- (184) ASTM D6522-00 (Reapproved 2005), Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers, (Approved October 1, 2005), IBR approved for table 2 to subpart JJJJ, §§60.5413(b) and (d), and 60.5413a(b).
- (185) ASTM D6522-11 Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers (Approved December 1, 2011), IBR approved for §60.37f(a), 60.766(a).
- (186) ASTM D6667-01, Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases by Ultraviolet Fluorescence, IBR approved for §60.335(b).
- (187) ASTM D6667-04, Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases by Ultraviolet Fluorescence, IBR approved for §60.4415(a).
- (188) ASTM D6751-11b, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels, including Appendices X1 through X3, (Approved July 15, 2011), IBR approved for §§60.41b, 60.41c, and 60.5580.
- (189) ASTM D6784-02, Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method), IBR approved for §60.56c(b) and appendix B to part 60: Performance Specification 12A, Section 8.6.2.
- (190) ASTM D6784-02 (Reapproved 2008) Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method), (Approved April 1, 2008), IBR approved for §§60.2165(j) and 60.2730(j), tables 1, 5, 6 and 8 to subpart CCCC, and tables 2, 6, 7, and 9 to subpart DDDD, §§60.4900(b), 60.5220(b), tables 1 and 2 to subpart LLLL, and tables 2 and 3 to subpart MMMM.
- (191) ASTM D6911-15, Standard Guide for Packaging and Shipping Environmental Samples for Laboratory Analysis, approved January 15, 2015, IBR approved for appendix A-8: Method 30B.

- (192) ASTM D7467-10, Standard Specification for Diesel Fuel Oil, Biodiesel Blend (B6 to B20), including Appendices X1 through X3, (Approved August 1, 2010), IBR approved for §§60.41b, 60.41c, and 60.5580.
- (193) ASTM E168-67, General Techniques of Infrared Quantitative Analysis, IBR approved for §§60.485a(d), 60.593(b), 60.593a(b), and 60.632(f).
- (194) ASTM E168-77, General Techniques of Infrared Quantitative Analysis, IBR approved for §§60.485a(d), 60.593(b), 60.593a(b), and 60.632(f).
- (195) ASTM E168-92, General Techniques of Infrared Quantitative Analysis, IBR approved for §§60.485a(d), 60.593(b), 60.593a(b), 60.632(f), 60.5400, 60.5400a(f).
- (196) ASTM E169-63, General Techniques of Ultraviolet Quantitative Analysis, IBR approved for §§60.485a(d), 60.593(b), 60.593a(b), and 60.632(f).
- (197) ASTM E169-77, General Techniques of Ultraviolet Quantitative Analysis, IBR approved for §§60.485a(d), 60.593(b), and 60.593a(b), 60.632(f).
- (198) ASTM E169-93, General Techniques of Ultraviolet Quantitative Analysis, (Approved May 15, 1993), IBR approved for §§60.485a(d), 60.593(b), 60.593a(b), 60.632(f), 60.5400(f), and 60.5400a(f).
- (199) ASTM E260-73, General Gas Chromatography Procedures, IBR approved for §§60.485a(d), 60.593(b), 60.593a(b), and 60.632(f).
- (200) ASTM E260-91, General Gas Chromatography Procedures, (IBR approved for §§60.485a(d), 60.593(b), 60.593a(b), and 60.632(f).
- (201) ASTM E260-96, General Gas Chromatography Procedures, (Approved April 10, 1996), IBR approved for §§60.485a(d), 60.593(b), 60.593a(b), 60.632(f), 60.5400(f), 60.5400a(f), 60.5406(b), and 60.5406a(b)(3).
- (202) ASTM E617-13, Standard Specification for Laboratory Weights and Precision Mass Standards, approved May 1, 2013, IBR approved for appendix A-3: Methods 4, 5, 5H, 5I, and appendix A-8: Method 29.
- (203) ASTM E871-82 (Reapproved 2013), Standard Test Method for Moisture Analysis of Particulate Wood Fuels, (Approved August 15, 2013), IBR approved for appendix A-8: method 28R.
- (204) ASTM E1584-11, Standard Test Method for Assay of Nitric Acid, (Approved August 1, 2011), IBR approved for §60.73a(c).
- (205) ASTM E2515-11, Standard Test Method for Determination of Particulate Matter Emissions Collected by a Dilution Tunnel, (Approved November 1, 2011), IBR approved for §60.534 and §60.5476.
- (206) ASTM E2618-13 Standard Test Method for Measurement of Particulate Matter Emissions and Heating Efficiency of Outdoor Solid Fuel-Fired Hydronic Heating Appliances, (Approved September 1, 2013), IBR approved for §60.5476.
- (207) ASTM E2779-10, Standard Test Method for Determining Particulate Matter Emissions from Pellet Heaters, (Approved October 1, 2010), IBR approved for §60.534.
- (208) ASTM E2780-10, Standard Test Method for Determining Particulate Matter Emissions from Wood Heaters, (Approved October 1, 2010), IBR approved for appendix A: method 28R.
- (209) ASTM UOP539-97, Refinery Gas Analysis by Gas Chromatography, (Copyright 1997), IBR approved for §60.107a(d).
- (i) Association of Official Analytical Chemists, 1111 North 19th Street, Suite 210, Arlington, VA 22209.

- (1) AOAC Method 9, Official Methods of Analysis of the Association of Official Analytical Chemists (AOAC), 11th edition, 1970, pp. 11-12, IBR approved for §§60.204(b), 60.214(b), 60.224(b), and 60.234(b).
- (2) [Reserved]
- (j) U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue NW., Washington, DC 20460, (202) 272-0167, <http://www.epa.gov>.
- (1) EPA-454/R-98-015, Office of Air Quality Planning and Standards (OAQPS) Fabric Filter Bag Leak Detection Guidance, September 1997, IBR approved for §§60.2145(r), 60.2710(r), 60.4905(b), and 60.5225(b).
- (2) EPA-600/R-12/531, EPA Traceability Protocol for Assay and Certification of Gaseous Calibration Standards, May 2012, IBR approved for §§60.5413(d) and 60.5413a(d).
- (k) The Gas Processors Association, 6526 East 60th Street, Tulsa, OK 74145; also available through Information Handling Services, 15 Inverness Way East, PO Box 1154, Englewood, CO 80150-1154. You may inspect a copy at the EPA's Air and Radiation Docket and Information Center, Room 3334, 1301 Constitution Ave. NW., Washington, DC 20460.
- (1) Gas Processors Association Standard 2172-09, Calculation of Gross Heating Value, Relative Density, Compressibility and Theoretical Hydrocarbon Liquid Content for Natural Gas Mixtures for Custody Transfer (2009), IBR approved for §60.107a(d).
- (2) Gas Processors Association Standard 2261-00, Analysis for Natural Gas and Similar Gaseous Mixtures by Gas Chromatography (2000), IBR approved for §60.107a(d).
- (3) Gas Processors Association Standard 2377-86, Test for Hydrogen Sulfide and Carbon Dioxide in Natural Gas Using Length of Stain Tubes, 1986 Revision, IBR approved for §§60.105(b), 60.107a(b), 60.334(h), 60.4360, and 60.4415(a).
- (l) International Organization for Standardization (ISO) available through IHS Inc., 15 Inverness Way East, Englewood, CO 80112.
- (1) ISO 8178-4: 1996(E), Reciprocating Internal Combustion Engines—Exhaust Emission Measurement—part 4: Test Cycles for Different Engine Applications, IBR approved for §60.4241(b).
- (2) [Reserved]
- (m) International Organization for Standardization (ISO), 1, ch. de la Voie-Creuse, Case postale 56, CH-1211 Geneva 20, Switzerland, + 41 22 749 01 11, <http://www.iso.org/iso/home.htm>.
- (1) ISO 2314:2009(E), Gas turbines-Acceptance tests, Third edition (December 15, 2009), IBR approved for §60.5580.
- (2) ISO 8316: Measurement of Liquid Flow in Closed Conduits—Method by Collection of the Liquid in a Volumetric Tank (1987-10-01)—First Edition, IBR approved for §60.107a(d).
- (n) This material is available for purchase from the National Technical Information Services (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161. You may inspect a copy at the EPA's Air and Radiation Docket and Information Center (Docket A-91-61, Item IV-J-125), Room M-1500, 1200 Pennsylvania Ave. NW., Washington, DC 20460.
- (1) OMB Bulletin No. 93-17: Revised Statistical Definitions for Metropolitan Areas. Office of Management and Budget, June 30, 1993. NTIS No. PB 93-192-664. IBR approved for §60.31e.
- (2) [Reserved]
- (o) North American Electric Reliability Corporation, 1325 G Street NW., Suite 600, Washington, DC 20005-3801, <http://www.nerc.com>.

(1) North American Electric Reliability Corporation Reliability Standard EOP-002-3, Capacity and Energy Emergencies, updated November 19, 2012, IBR approved for §§60.4211(f) and 60.4243(d). Also available online: http://www.nerc.com/files/EOP-002-3_1.pdf.

(2) [Reserved]

(p) The following material is available for purchase from the Technical Association of the Pulp and Paper Industry (TAPPI), 15 Technology Parkway South, Suite 115, Peachtree Corners, GA 30092, Telephone (800) 332-8686, and is also available at the following Web site: <http://www.tappi.org>.

(1) TAPPI Method T 624 cm-11, (Copyright 2011), IBR approved, for §§60.285(d) and 60.285a(d).

(2) [Reserved]

(q) Underwriter's Laboratories, Inc. (UL), 333 Pfingsten Road, Northbrook, IL 60062.

(1) UL 103, Sixth Edition revised as of September 3, 1986, Standard for Chimneys, Factory-built, Residential Type and Building Heating Appliance, IBR approved for appendix A-8 to part 60.

(2) [Reserved]

(r) Water Pollution Control Federation (WPCF), 2626 Pennsylvania Avenue NW., Washington, DC 20037.

(1) Method 209A, Total Residue Dried at 103-105 °C, in Standard Methods for the Examination of Water and Wastewater, 15th Edition, 1980, IBR approved for §60.683(b).

(2) [Reserved]

(s) West Coast Lumber Inspection Bureau, 6980 SW. Barnes Road, Portland, OR 97223.

(1) West Coast Lumber Standard Grading Rules No. 16, pages 5-21, 90 and 91, September 3, 1970, revised 1984, IBR approved for appendix A-8 to part 60.

(2) [Reserved]

(t) This material is available for purchase from the Canadian Standards Association (CSA), 5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6, Telephone: 800-463-6727.

(1) CSA B415.1-10, Performance Testing of Solid-fuel-burning Heating Appliances, (March 2010), IBR approved for §60.534 and §60.5476. (The standard is also available at <http://shop.csa.ca/en/canada/fuel-burning-equipment/b4151-10/invnt/27013322010>)

(2) [Reserved]

(u) This European National (EN) standards material is available for purchase at European Committee for Standardization, Management Centre, Avenue Marnix 17, B-1000 Brussels, Belgium, Telephone: + 32 2 550 0811.

(1) DIN EN 303-5:2012E (EN 303-5), Heating boilers—Part 5: Heating boilers for solid fuels, manually and automatically stoked, nominal heat output of up to 500 kW—Terminology, requirements, testing and marking, (October 2012), IBR approved for §60.5476. (The standard is also available at http://www.en-standard.eu/csn-en-303-5-heating-boilers-part-5-heating-boilers-for-solid-fuels-manually-and-automatically-stoked-nominal-heat-output-of-up-to-500-kw-terminology-requirements-testing-and-marking/?gclid=CJX12P_97MMCFdcccQodan8ATA)

(2) [Reserved]

§60.18 General control device and work practice requirements.

(a) Introduction.

(1) This section contains requirements for control devices used to comply with applicable subparts of 40 CFR parts 60 and 61. The requirements are placed here for administrative convenience and apply only to facilities covered by subparts referring to this section.

(2) This section also contains requirements for an alternative work practice used to identify leaking equipment. This alternative work practice is placed here for administrative convenience and is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, appendix A-7, Method 21 monitor.

(b) *Flares*. Paragraphs (c) through (f) apply to flares.

(c)(1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

(2) Flares shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f).

(3) An owner/operator has the choice of adhering to either the heat content specifications in paragraph (c)(3)(ii) of this section and the maximum tip velocity specifications in paragraph (c)(4) of this section, or adhering to the requirements in paragraph (c)(3)(i) of this section.

(i)(A) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume), or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity, V_{max} , as determined by the following equation:

$$V_{max} = (X_{H_2} - K_1) * K_2$$

Where:

V_{max} = Maximum permitted velocity, m/sec.

K_1 = Constant, 6.0 volume-percent hydrogen.

K_2 = Constant, 3.9(m/sec)/volume-percent hydrogen.

X_{H_2} = The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77. (Incorporated by reference as specified in §60.17).

(B) The actual exit velocity of a flare shall be determined by the method specified in paragraph (f)(4) of this section.

(ii) Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (f)(3) of this section.

(4)(i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4) of this section, less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (c)(4) (ii) and (iii) of this section.

(ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than the velocity, V_{max} , as determined by the method specified in paragraph (f)(5), and less than 122 m/sec (400 ft/sec) are allowed.

(5) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity, V_{max} , as determined by the method specified in paragraph (f)(6).

(6) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.

(d) Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices.

(e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

(f)(1) Method 22 of appendix A to this part shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.

(2) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.

(3) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^n C_i H_i$$

where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$$K = \text{Constant, } 1.740 \times 10^{-7} \left(\frac{1}{\text{ppm}} \right) \left(\frac{\text{g mole}}{\text{scm}} \right) \left(\frac{\text{MJ}}{\text{kcal}} \right)$$

where the standard temperature for $\left(\frac{\text{g mole}}{\text{scm}} \right)$ is 20°C;

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 or 90 (Reapproved 1994) (Incorporated by reference as specified in §60.17); and

H_i = Net heat of combustion of sample component i , kcal/g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in §60.17) if published values are not available or cannot be calculated.

(4) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.

(5) The maximum permitted velocity, V_{max} , for flares complying with paragraph (c)(4)(iii) shall be determined by the following equation.

$$\text{Log}_{10} (V_{max}) = (H_T + 28.8)/31.7$$

V_{max} = Maximum permitted velocity, M/sec

28.8 = Constant

31.7 = Constant

H_r = The net heating value as determined in paragraph (f)(3).

(6) The maximum permitted velocity, V_{max} , for air-assisted flares shall be determined by the following equation.

$$V_{max} = 8.706 + 0.7084 (H_r)$$

V_{max} = Maximum permitted velocity, m/sec

8.706 = Constant

0.7084 = Constant

H_r = The net heating value as determined in paragraph (f)(3).

(g) *Alternative work practice for monitoring equipment for leaks.* Paragraphs (g), (h), and (i) of this section apply to all equipment for which the applicable subpart requires monitoring with a 40 CFR part 60, appendix A-7, Method 21 monitor, except for closed vent systems, equipment designated as leakless, and equipment identified in the applicable subpart as having no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. An owner or operator may use an optical gas imaging instrument instead of a 40 CFR part 60, appendix A-7, Method 21 monitor. Requirements in the existing subparts that are specific to the Method 21 instrument do not apply under this section. All other requirements in the applicable subpart that are not addressed in paragraphs (g), (h), and (i) of this section apply to this standard. For example, equipment specification requirements, and non-Method 21 instrument recordkeeping and reporting requirements in the applicable subpart continue to apply. The terms defined in paragraphs (g)(1) through (5) of this section have meanings that are specific to the alternative work practice standard in paragraphs (g), (h), and (i) of this section.

(1) *Applicable subpart* means the subpart in 40 CFR parts 60, 61, 63, or 65 that requires monitoring of equipment with a 40 CFR part 60, appendix A-7, Method 21 monitor.

(2) *Equipment* means pumps, valves, pressure relief valves, compressors, open-ended lines, flanges, connectors, and other equipment covered by the applicable subpart that require monitoring with a 40 CFR part 60, appendix A-7, Method 21 monitor.

(3) *Imaging* means making visible emissions that may otherwise be invisible to the naked eye.

(4) *Optical gas imaging instrument* means an instrument that makes visible emissions that may otherwise be invisible to the naked eye.

(5) *Repair* means that equipment is adjusted, or otherwise altered, in order to eliminate a leak.

(6) *Leak* means:

(i) Any emissions imaged by the optical gas instrument;

(ii) Indications of liquids dripping;

(iii) Indications by a sensor that a seal or barrier fluid system has failed; or

(iv) Screening results using a 40 CFR part 60, appendix A-7, Method 21 monitor that exceed the leak definition in the applicable subpart to which the equipment is subject.

(h) The alternative work practice standard for monitoring equipment for leaks is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, appendix A-7, Method 21 monitor.

- (1) An owner or operator of an affected source subject to CFR parts 60, 61, 63, or 65 can choose to comply with the alternative work practice requirements in paragraph (i) of this section instead of using the 40 CFR part 60, appendix A-7, Method 21 monitor to identify leaking equipment. The owner or operator must document the equipment, process units, and facilities for which the alternative work practice will be used to identify leaks.
 - (2) Any leak detected when following the leak survey procedure in paragraph (i)(3) of this section must be identified for repair as required in the applicable subpart.
 - (3) If the alternative work practice is used to identify leaks, re-screening after an attempted repair of leaking equipment must be conducted using either the alternative work practice or the 40 CFR part 60, appendix A-7, Method 21 monitor at the leak definition required in the applicable subpart to which the equipment is subject.
 - (4) The schedule for repair is as required in the applicable subpart.
 - (5) When this alternative work practice is used for detecting leaking equipment, choose one of the monitoring frequencies listed in Table 1 to subpart A of this part in lieu of the monitoring frequency specified for regulated equipment in the applicable subpart. Reduced monitoring frequencies for good performance are not applicable when using the alternative work practice.
 - (6) When this alternative work practice is used for detecting leaking equipment the following are not applicable for the equipment being monitored:
 - (i) Skip period leak detection and repair;
 - (ii) Quality improvement plans; or
 - (iii) Complying with standards for allowable percentage of valves and pumps to leak.
 - (7) When the alternative work practice is used to detect leaking equipment, the regulated equipment in paragraph (h)(1)(i) of this section must also be monitored annually using a 40 CFR part 60, appendix A-7, Method 21 monitor at the leak definition required in the applicable subpart. The owner or operator may choose the specific monitoring period (for example, first quarter) to conduct the annual monitoring. Subsequent monitoring must be conducted every 12 months from the initial period. Owners or operators must keep records of the annual Method 21 screening results, as specified in paragraph (i)(4)(vii) of this section.
- (i) An owner or operator of an affected source who chooses to use the alternative work practice must comply with the requirements of paragraphs (i)(1) through (i)(5) of this section.
- (1) Instrument Specifications. The optical gas imaging instrument must comply with the requirements in (i)(1)(i) and (i)(1)(ii) of this section.
 - (i) Provide the operator with an image of the potential leak points for each piece of equipment at both the detection sensitivity level and within the distance used in the daily instrument check described in paragraph (i)(2) of this section. The detection sensitivity level depends upon the frequency at which leak monitoring is to be performed.
 - (ii) Provide a date and time stamp for video records of every monitoring event.
 - (2) Daily Instrument Check. On a daily basis, and prior to beginning any leak monitoring work, test the optical gas imaging instrument at the mass flow rate determined in paragraph (i)(2)(i) of this section in accordance with the procedure specified in paragraphs (i)(2)(ii) through (i)(2)(iv) of this section for each camera configuration used during monitoring (for example, different lenses used), unless an alternative method to demonstrate daily instrument checks has been approved in accordance with paragraph (i)(2)(v) of this section.
 - (i) Calculate the mass flow rate to be used in the daily instrument check by following the procedures in paragraphs (i)(2)(i)(A) and (i)(2)(i)(B) of this section.

(A) For a specified population of equipment to be imaged by the instrument, determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, within the distance to be used in paragraph (i)(2)(iv)(B) of this section, at or below the standard detection sensitivity level.

(B) Multiply the standard detection sensitivity level, corresponding to the selected monitoring frequency in Table 1 of subpart A of this part, by the mass fraction of detectable chemicals from the stream identified in paragraph (i)(2)(i)(A) of this section to determine the mass flow rate to be used in the daily instrument check, using the following equation.

$$E_{dic} = (E_{sds}) \sum_{i=1}^k x_i$$

Where:

E_{dic} = Mass flow rate for the daily instrument check, grams per hour

x_i = Mass fraction of detectable chemical(s) i seen by the optical gas imaging instrument, within the distance to be used in paragraph (i)(2)(iv)(B) of this section, at or below the standard detection sensitivity level, E_{sds} .

E_{sds} = Standard detection sensitivity level from Table 1 to subpart A, grams per hour

k = Total number of detectable chemicals emitted from the leaking equipment and seen by the optical gas imaging instrument.

(ii) Start the optical gas imaging instrument according to the manufacturer's instructions, ensuring that all appropriate settings conform to the manufacturer's instructions.

(iii) Use any gas chosen by the user that can be viewed by the optical gas imaging instrument and that has a purity of no less than 98 percent.

(iv) Establish a mass flow rate by using the following procedures:

(A) Provide a source of gas where it will be in the field of view of the optical gas imaging instrument.

(B) Set up the optical gas imaging instrument at a recorded distance from the outlet or leak orifice of the flow meter that will not be exceeded in the actual performance of the leak survey. Do not exceed the operating parameters of the flow meter.

(C) Open the valve on the flow meter to set a flow rate that will create a mass emission rate equal to the mass rate specified in paragraph (i)(2)(i) of this section while observing the gas flow through the optical gas imaging instrument viewfinder. When an image of the gas emission is seen through the viewfinder at the required emission rate, make a record of the reading on the flow meter.

(v) Repeat the procedures specified in paragraphs (i)(2)(ii) through (i)(2)(iv) of this section for each configuration of the optical gas imaging instrument used during the leak survey.

(vi) To use an alternative method to demonstrate daily instrument checks, apply to the Administrator for approval of the alternative under §60.13(i).

(3) Leak Survey Procedure. Operate the optical gas imaging instrument to image every regulated piece of equipment selected for this work practice in accordance with the instrument manufacturer's operating

parameters. All emissions imaged by the optical gas imaging instrument are considered to be leaks and are subject to repair. All emissions visible to the naked eye are also considered to be leaks and are subject to repair.

(4) Recordkeeping. You must keep the records described in paragraphs (i)(4)(i) through (i)(4)(vii) of this section:

- (i) The equipment, processes, and facilities for which the owner or operator chooses to use the alternative work practice.
- (ii) The detection sensitivity level selected from Table 1 to subpart A of this part for the optical gas imaging instrument.
- (iii) The analysis to determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, as specified in paragraph (i)(2)(i)(A) of this section.
- (iv) The technical basis for the mass fraction of detectable chemicals used in the equation in paragraph (i)(2)(i)(B) of this section.
- (v) The daily instrument check. Record the distance, per paragraph (i)(2)(iv)(B) of this section, and the flow meter reading, per paragraph (i)(2)(iv)(C) of this section, at which the leak was imaged. Keep a video record of the daily instrument check for each configuration of the optical gas imaging instrument used during the leak survey (for example, the daily instrument check must be conducted for each lens used). The video record must include a time and date stamp for each daily instrument check. The video record must be kept for 5 years.
- (vi) Recordkeeping requirements in the applicable subpart. A video record must be used to document the leak survey results. The video record must include a time and date stamp for each monitoring event. A video record can be used to meet the recordkeeping requirements of the applicable subparts if each piece of regulated equipment selected for this work practice can be identified in the video record. The video record must be kept for 5 years.
- (vii) The results of the annual Method 21 screening required in paragraph (h)(7) of this section. Records must be kept for all regulated equipment specified in paragraph (h)(1) of this section. Records must identify the equipment screened, the screening value measured by Method 21, the time and date of the screening, and calibration information required in the existing applicable subpart.

(5) Reporting. Submit the reports required in the applicable subpart. Submit the records of the annual Method 21 screening required in paragraph (h)(7) of this section to the Administrator via e-mail to CCG-AWP@EPA.GOV.

§60.19 General notification and reporting requirements.

- (a) For the purposes of this part, time periods specified in days shall be measured in calendar days, even if the word "calendar" is absent, unless otherwise specified in an applicable requirement.
- (b) For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be delivered or postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery, including the use of electronic media, agreed to by the permitting authority, is acceptable.

(c) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(d) If an owner or operator of an affected facility in a State with delegated authority is required to submit periodic reports under this part to the State, and if the State has an established timeline for the submission of periodic reports that is consistent with the reporting frequency(ies) specified for such facility under this part, the owner or operator may change the dates by which periodic reports under this part shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. The allowance in the previous sentence applies in each State beginning 1 year after the affected facility is required to be in compliance with the applicable subpart in this part. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(e) If an owner or operator supervises one or more stationary sources affected by standards set under this part and standards set under part 61, part 63, or both such parts of this chapter, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State with an approved permit program) a common schedule on which periodic reports required by each applicable standard shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning 1 year after the stationary source is required to be in compliance with the applicable subpart in this part, or 1 year after the stationary source is required to be in compliance with the applicable 40 CFR part 61 or part 63 of this chapter standard, whichever is latest. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

(f)(1)(i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (f)(2) and (f)(3) of this section, the owner or operator of an affected facility remains strictly subject to the requirements of this part.

(ii) An owner or operator shall request the adjustment provided for in paragraphs (f)(2) and (f)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.

(2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.

(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

Table 1 to Subpart A of Part 60—Detection Sensitivity Levels (grams per hour)

Monitoring frequency per subpart ^a	Detection sensitivity level
Bi-Monthly	60

Permit Issued: [month day, year]
Permit Expires: [month day, year]

12300341-101
Page 672 of 672

Semi-Quarterly	85
Monthly	100

^aWhen this alternative work practice is used to identify leaking equipment, the owner or operator must choose one of the monitoring frequencies listed in this table in lieu of the monitoring frequency specified in the applicable subpart. Bi-monthly means every other month. Semi-quarterly means twice per quarter. Monthly means once per month.

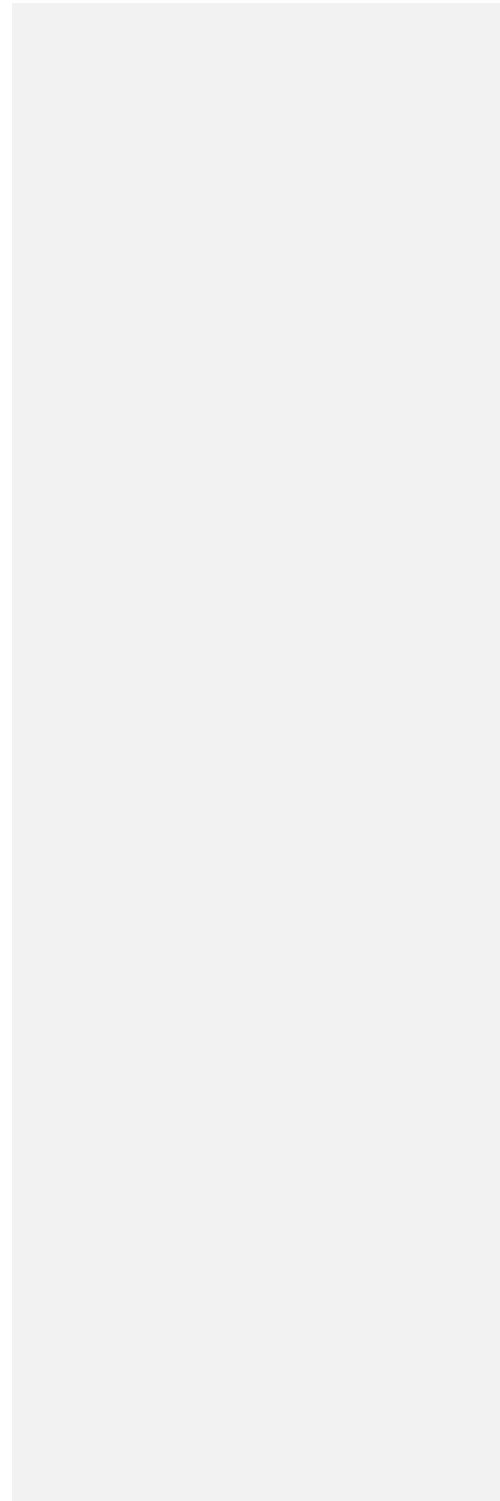


Exhibit 4

Technical White Paper

Response to the Minnesota Department of Health's July 13, 2022, memorandum to the Minnesota Pollution Control Agency Regarding the MDH 2020 Risk Assessment Advice (RAA) for Trans-1,2-dichloroethylene

Prepared by Dr. Deborah Gray PhD., DABT, Stantec Consulting Services, Inc.

August 19, 2022

At the request of outside legal counsel for Water Gremlin, Stantec Consulting Services, Inc. (Stantec) reviewed the July 13, 2022, memorandum from James Kelly, Manager, Environmental Assessment and Surveillance Section, Minnesota Department of Health (MDH) to Kari Palmer, Manager, Air Assessment Section, Minnesota Pollution Control Agency (MPCA). The MDH memorandum indicates it was prepared as a follow-up to the MDH 2020 Risk Assessment Advice (RAA) for trans-1,2-dichloroethylene (TDCE). Water Gremlin previously questioned the scientific and technical basis for the MDH subchronic (200 $\mu\text{g}/\text{m}^3$) and chronic (20 $\mu\text{g}/\text{m}^3$) RAA concentrations of TDCE that MPCA subsequently relied upon to develop permit limits for Water Gremlin's air emissions and usage of solvent at their facility in White Bear Township. See, Stantec's Technical Memorandum submitted to the MPCA on April 22, 2022, incorporated herein by reference. The overarching technical issue is MDH's insistence on using toxicity values from an oral drinking water study to calculate a RAA concentration for TDCE in ambient air, rather than adopting an existing Provisional Peer Reviewed inhalation toxicity value (PPRTV) published by EPA that is directly relevant to evaluating exposure to concentrations of this chemical in ambient air. As detailed in their July 2022 memo to MPCA, in addition to entirely irrelevant comments regarding alleged past facility emissions of TCE to the community, the MDH rationale for not adopting the EPA inhalation reference concentration for setting air emissions limits for the Water Gremlin facility has numerous technical flaws and inconsistencies. The purpose of this White Paper is to provide a detailed discussion of Water Gremlin's concerns with the scientific basis for the MDH RAA and to address qualitative arguments presented by MDH to further support their decision. We have organized this White Paper to align with the major scientific and technical issues identified in Water Gremlin Company's Petition for a Contested Case Hearing Pursuant to Minn. Stat. Ch. 14 and Minn. R.7000.1800 and 7000.1900.

Issues of Fact Regarding the Validity of the MDH RAA

There is no dispute that the relevant exposure pathway for the Water Gremlin facility is through inhalation TDCE from the ambient air. However, as described below, MDH calculated the RAA for TDCE in ambient air for MPCA use in Water Gremlin's permit based on oral toxicity values (oral RfD) published by EPA (2010) and California EPA Office of Health Hazard Assessment (OEHHA, 2018). MDH used a method referred to as "route-to-route extrapolation" to convert a dose from ingestion to an air concentration. In 2019 and early 2020, there was no established reference concentration (RfC) for inhalation exposures to TDCE in air. However, in September 2020, before the MPCA issued the draft permit for Water Gremlin, EPA published screening level PPRTV reference concentrations (p-RfC) of 400 $\mu\text{g}/\text{m}^3$ for subchronic and 40 $\mu\text{g}/\text{m}^3$ for chronic exposures. It is Water Gremlin's contention that the EPA (2020) PPRTV p-RfC for subchronic and chronic RfCs of 400 $\mu\text{g}/\text{m}^3$ and 40 $\mu\text{g}/\text{m}^3$, respectively is the

relevant and defensible basis for incorporation into the facility's air emissions permit since these values were derived from an inhalation exposure study and is directly applicable to ambient air.

Method Used by MDH to Develop the RAA for Trans-1,2-Dichloroethylene

The MDH document *Health Based Guidance for Air, Toxicological summary for: trans-1,2-dichloroethylene* (MDH, 2020a) outlines their method to develop the Risk Assessment Advice (RAA) value for MPCA to use in the air emissions permit for the Water Gremlin facility. A companion document, *Water Gremlin Health Assessment Series. Trans-1,2-Dichloroethylene in Air and Health* (MDH, 2020b) describes how MDH developed RAA values at the request of MPCA to be used in the air emissions permit for Water Gremlin, and MDH conclusions about possible health risk.

MDH developed two RAA values for TDCE. The first RAA developed in January 2019 established a chronic RAA for TDCE of 70 µg/m³ (the implied but not stated subchronic standard would be 700 µg/m³). In April 2020, MDH replaced their previous RAA with new subchronic and chronic RAA concentrations for TDCE of 200 µg/m³ and 20 µg/m³, respectively. Both the 2019 and 2020 RAA values were derived from an oral reference dose (RfD) using the following formula for route-to-route extrapolation found in EPA (1996) *Soil Screening Guidance: Technical Background Document*. May. EPA/540/R95/128. The 2019 RAA was derived from the chronic oral RfD of 0.02 mg/kg-d currently posted on EPA IRIS (2010); the 2020 RAAs were derived from subchronic and chronic oral RfDs of 0.05 mg/kg-d and 0.005 mg/kg-d, respectively published by Cal-EPA OEHHA (2018).

$$RfC = RfD \text{ (mg/kg-d)} \times (70 \text{ kg}/20\text{m}^3) \times (1000 \text{ }\mu\text{g}/\text{mg})$$

Where:

RfC – inhalation Reference Concentration in µg of chemical/m³ of air

RfD – oral Reference Dose in mg of chemical/kg body weight per day

70 kg – body weight of an adult human

20 m³ – assumed volume of air breathed by an adult human every day

1000 µg/mg – conversion from mg to µg

Both the EPA IRIS (2010) oral RfD and the CalEPA OEHHA (2018) oral RfD that MDH used in their route-to-route calculation of RAA concentrations in 2019 and 2020 (MDH 2020a) come from the EPA (2010) review of the toxicology database for TDCE (and cis-1,2-DCE) in support of information on IRIS. EPA identified a subchronic (90-day) drinking water study with mice (Barnes et al. 1985; and Shopp et al., 1985) that was adequate to support derivation of an oral RfD for TDCE. In this two-part study, male and female mice were exposed to TDCE in drinking water for up to 90 days (90 days is considered a subchronic exposure in rodents because it is less than the average lifespan of most rats and mice – approximately 2 years). The doses of TDCE for male mice were 0 (controls), 17, 175, and 387 mg TDCE per kilogram body weight of the animals per day (mg/kg-d). The doses for female mice were 0 (controls), 23, 224, and 452 mg/kg-d. Barnes et al. 1985 as cited in EPA (2010) reported on the study design and measurements of body and organ tissue weights, and standard parameter values in blood.

In the second part of the study Shopp et al. 1985, as cited in EPA (2010), conducted a set of three commonly used tests of humoral immune response in the mice following 90 days of exposure to TDCE in drinking water: 1) number of Antibody Forming Cells (AFCs) in the spleen following a challenge with sheep red blood cells (sRBCs); 2) hemagglutinin titers in response to sRBCs; and 3) spleen cell response to B cell mitogen lipopolysaccharide (LPS). This battery of tests involves administering sRBC (foreign antigen) to the live animals after exposure to TDCE ended, waiting 4-5 days, sacrificing the animals, and examining cells from the spleens. Responses in the TDCE treated mice were compared to responses in the control animals (dose = 0). A decrease in AFCs/number of spleen cells following sRBC challenge compared to controls was the most sensitive treatment-related effect identified from this two-part study. Furthermore, only male mice had fewer AFC/number of spleen cells compared to controls. There were no significant differences in female mice compared to controls even though TDCE dose levels for the females were higher than for the males.

It should be noted that the candidate studies reviewed by EPA (2010) included different protocols and end points. EPA (2010) selected the Shopp et al. 1985 mouse drinking water study as the basis for deriving an oral RfD because the response to sRBC challenge in male mice was the most sensitive response identified at the lowest dose level among the candidate studies. The oral RfD (0.02 mg/kg-d) published on IRIS (September 2010) was derived from Shopp et al. (1985) using the EPA Benchmark Dose Technical Guidance (EPA, 2000) and BMDS software (versions 1.4.1 and 2.1.1) available at that time.

The *Summary of Guidance Value History* MDH (2020a) explains their decision to use the CalEPA OEHHA (2018) oral RfD as the basis for their revised route-to-route extrapolation of the RAA. CalEPA was critical of the benchmark dose modeling techniques used by EPA (2010) to derive the chronic oral RfD for TDCE of 0.02 mg/kg-day currently listed on the EPA IRIS webpage. MDH's summary of OEHHA (2018) criticisms of the dose-response model used by EPA in 2010 is not particularly enlightening, but references updates to EPA guidance for benchmark dose modeling and evolution of benchmark dose software models (BMDS). As stated above, the oral RfD currently on IRIS (EPA, 2010) was derived from the Shopp et al. 1985 data using the benchmark dose modeling tools available at that time. Since 2010, EPA has issued an updated technical guidance (EPA, 2012) and selection of BMDS software models. CalEPA OEHHA (2018) used newer versions of BMDS than presented by EPA in 2012 to re-evaluate the same data from the Shopp et al. 1985 drinking water study. This resulted in a revised chronic oral RfD of 0.005 mg/kg-d.

A Note about Benchmark Dose and Benchmark Dose Modeling Software

For some data sets with multiple dose levels and subjects per dose level, the Point of Departure (POD) for subsequent derivation of non-cancer toxicity factors such as the oral RfD and inhalation RfC can be estimated using threshold dose-response models. EPA defines the Benchmark Dose (BMD) as “*an exposure due to a dose of a substance associated with a specified low incidence of risk, generally in the range of 1% to 10%, of a health effect; or the dose associated with a specified measure or change of a biological effect.*” The selection of Benchmark Dose Software (BMDS) models continues to evolve to accommodate different study designs and variables. EPA's BMDS webpage provides easy access to [numerous dose-response models](#) that the user may select from and/or compare, to make predictions about the quantitative relationship between the dose or exposure of a chemical or chemical mixture associated with a given response level.

The fact that BMDS models are continually evolving provides important context to understand CalEPA OEHHA (2018) critique of the EPA (2010) oral RfD for TDCE as summarized by MDH (2020a). This will become important as EPA itself would later apply updated BMDS software to derive the PPRTV.

Limitations of MDH Use of Route-to-Route Extrapolation to Derive Inhalation Toxicity Values from Oral Toxicity Values

There are two major routes by which chemicals in the ambient or personal environment get into a person's body: oral – (1) ingestion of the chemical in drinking water, food or non-dietary items such as soil that are absorbed through the gastrointestinal tract; and (2) inhalation – breathing the chemical into the respiratory tract. Dermal absorption through the skin can also occur but generally contributes less to human exposures from environmental media than inhalation or ingestion and is not relevant to the issues at hand. The same chemical may cause different types of health effects, or the effects may occur at higher or lower levels depending on the route of exposure. Thus, it cannot be assumed that the dose-response relationship of a chemical from inhalation is comparable to that from ingestion. Therefore, **it is always more technically defensible to evaluate inhalation exposure to chemicals in the air using toxicity values derived from inhalation studies, and ingestion exposures using toxicity values derived from oral dosing studies.**

There may be situations where the toxicology and health effects database for a chemical may not support derivation of toxicity values for both the oral and inhalation routes of exposure, and in that event, there may be circumstances in which route-to-route extrapolation is unavoidable. In the Soil Screening Guidance, EPA (1996) acknowledged that inhalation toxicity benchmarks may not be available on IRIS for some of the common contaminants found at Superfund Sites and lays out limitations and guidelines where route-to-route extrapolation may be used to calculate screening levels. See Section 2.1.4 Route-to-Route Extrapolation and APPENDIX B Route-to-Route Extrapolation of Inhalation Benchmarks of the Soil Screening Guidance (EPA 1996) for a more detailed discussion. However, note EPA's important caveats for extrapolated inhalation benchmarks.

*“...the extrapolated inhalation SSL values are not intended to be used as generic SSLs for site investigations; the extrapolated inhalation SSLs are useful in determining the potential for inhalation risks but should not be misused as SSLs. **The extrapolated inhalation benchmarks, used to calculate extrapolated inhalation SSLs, simply provide an estimate of the air concentration ($\mu\text{g}/\text{m}^3$) required to produce an inhaled dose equivalent to the dose received via oral administration, and lack the scientific rigor required by EPA for route-to-route extrapolation. Route-to-route extrapolation methods must account for a relationship between physicochemical properties, absorption and distribution of toxicants, the significance of portal-of-entry effects, and the potential differences in metabolic pathways associated with the intensity and duration of inhalation exposures.** ... The document, entitled *Methods for Derivation of Inhalation Reference Concentrations and Application of Inhalation Dosimetry* (U.S. EPA, 1994d), presents methods for applying inhalation dosimetry to derive inhalation reference concentrations and represents the current state-of-the-science at EPA with respect to inhalation benchmark development. The fundamentals of inhalation dosimetry are presented with respect to the toxicokinetic behavior of contaminants and the physicochemical properties of chemical contaminants.”*

As referenced in the Soil Screening Guidance (EPA 1996) quoted above, Methods for Derivation of Inhalation Reference Concentrations and Application of Inhalation Dosimetry (EPA 1994) further elaborates on the data requirements and limitations of extrapolating inhalation toxicity values from oral exposure data. Section 4.1.2 Route-to-Route Extrapolation states:

“When the data base for a given chemical is not adequate via inhalation, route-to-route extrapolation is often practiced by some risk assessors using empirically derived factors that are not necessarily applicable to the case at hand. For most route-to-route extrapolations, the lack of data, lack of ability to interpret data, and underutilization of existing data due to insufficient models and statistics reduce or eliminate the validity of these extrapolations” (emphases added.)

EPA further stated:

“Oral data should not be used for route-to-route extrapolation in the following instances:

- (1) when groups of chemicals are expected to have different toxicity by the two routes: for example, metals, irritants, and sensitizers*
- (2) when a first-pass effect by the respiratory tract is expected*
- (3) when a first-pass effect by the liver is expected*
- (4) when a respiratory tract effect is established, but dosimetry comparison cannot be clearly established between the two routes*
- (5) when the respiratory tract was not adequately studied in the oral studies; and*
- (6) when short-term inhalation studies, dermal irritation, in vitro studies, or characteristics of the chemical indicate potential for portal-of-entry effects at the respiratory tract, but studies themselves are not adequate for an RfC development.”*

These limitations readily apply to the MDH’s use of oral to inhalation route-to-route extrapolations for TDCE. Although MDH acknowledges the uncertainties in route-to-route extrapolation, nowhere in their analysis do they provide a discussion that any of the critical information requirements set out in the EPA guidance documents (EPA 1994 and 1996) have been considered and addressed. Consequently, the use of their extrapolated TDCE RAA values for enforceable standards in Water Gremlin’s air emissions permit is not supported by adequate data or reasoning.

Material Issues of Fact as to Whether the EPA TDCE PPRTV Provides a Superior Benchmark for Setting Water Gremlin Permit Limits to the MDH RAA

When EPA performed their toxicological review of cis and TDCE in 2010, they determined that the inhalation toxicology database was not adequate to support derivation of a Reference Concentration (RfC) under the requirements of the IRIS program. In 2020, EPA re-visited the inhalation toxicology database for TDCE and identified a 90-day subchronic inhalation study with male and female rats (DuPont/Kelly 1998) that was relevant for derivation of Provisional Peer Reviewed Toxicity Value (PPRTV) screening level subchronic and chronic RfCs of 400 µg/m³ and 40 µg/m³, respectively. The critical effect from the key study (DuPont/Kelly 1998) was a dose-related decrease in white blood cells

(leukocytes), also potentially related to an immune system response to the exposure. As stated by EPA (2020).

“The benchmark concentration lower confidence limit 1 SD (BMCL1SD) (HEC) of 109 mg/m³ for decreased lymphocyte counts in males at Day 90 from the subchronic-duration rat study (Kelly, 1998) is the lowest candidate POD in the available inhalation toxicity database for trans-1,2-DCE. In summary, Kelly (1998) is selected as the principal study because it identified the most sensitive POD and was adequate in experimental design and protocol. However, because the study was not peer reviewed, screening-level p-RfC values were derived for trans-1,2-DCE in Appendix A, in lieu of p-RfC values.”

“As discussed in the main body of the report, Kelly (1998) was an adequately designed subchronic study that evaluated several endpoints following exposure to three concentrations of trans-1,2-DCE. This study was chosen as the principal study and the corresponding benchmark concentration lower confidence limit 1 standard deviation (BMCL1SD) human equivalent concentration (HEC) of 109 mg/m³ for decreased lymphocyte counts in male rats was identified as the most sensitive point of departure (POD) for deriving screening-level p-RfC values. The observed leukopenia in rats (decreased white blood cell [WBC] and lymphocyte counts) was determined to be treatment related and suggests potential effects on the immune system. The critical effects for deriving a chronic oral reference dose (RfD) were based on altered immune function in mice (U.S. EPA, 2010), which provide additional evidence to suggest that trans-1,2-DCE targets the immune system. The Kelly (1998) study used whole-body inhalation exposure for compound administration; therefore, additional exposure through the gastrointestinal tract due to grooming is possible. This potential source of uncertainty cannot be quantified based on the available information. As a conservative estimate, the identified critical effects are assumed to be mostly due to inhalation exposure.”

EPA (2020) derived the current screening level p-RfC for TDCE using the data from the Kelly (1998) inhalation study with rats consistent with the most recent EPA BMD Technical Guidance (EPA 2012) and using BMDS version 3.1 to model benchmark concentrations. As noted previously, dose-response datasets may have different characteristics depending on study design and outcomes being measured. One size does not fit all when it comes to dose-response models. The BMDS version 3.1 dose response model that provided a good fit to the data from the Kelly (1998) inhalation study was not available at the time of EPA's 2010 toxicological review and derivation of the oral RfD for IRIS.

It is unclear why MDH readily adopted the OEHHA (2018) oral RfD, which was based on updated BMDS software, as the basis for extrapolating their May 2020 subchronic (200 µg/m³) and chronic (20 µg/m³) RfCs for TDCE, but chose to disregard EPA's analogous use of updated BMDS models to derive subchronic and chronic PPRTV p-RfCs from the Kelly (1998) inhalation study (EPA 2020).

In their July 22, 2022, memo, MDH relies almost entirely on the discussion of inhalation studies in EPA (2010) to discount the Kelly (1998) study as an inferior and unreliable basis for

derivation of a RfC. MDH also asserts that the Kelly (1998) study is inferior to the Shopp et al. 185 drinking water study because the former did not perform specific assays to evaluate the effects of TDCE on the immune system. There are two fallacies in this argument by MDH.

- 1) When EPA conducted their toxicological review in 2010, they compared the available inhalation studies back to a subchronic inhalation study conducted by Freund et al. 1977 (as cited in EPA 2010) which reported fatty changes in the livers of female rats. The Freundt study had significant design limitations such as a single TDCE exposure concentration and small number of animals. It should be noted that the PPRTV derived from this study (EPA 2006) was subsequently withdrawn from the electronic library (EPA 2014), triggering MDH's stated concern that the current PPRTV (EPA 2020) could be withdrawn in the future. EPA (2010) did not further consider the Kelly 1998 study because it did not corroborate the liver toxicity reported by Freundt – not because the Kelly study was poorly designed.
- 2) The fact that Kelly 1998 did not include specific immune system assays does not make it inferior to Shopp et al. 1985 or disqualify it as the basis for deriving a RfC. Each candidate study is evaluated on its own merits and findings. The accepted protocol is to identify the key study (based on design and quality) and the critical effect that was observed at the lowest dose compared to the controls. As stated clearly by EPA (2020) the Kelly 1998 subchronic rat inhalation study meets those requirements.

We know of no reason why EPA's (2020) re-evaluation of the inhalation toxicity database for TDCE under the PPRTV program would not be a more relevant and scientifically defensible basis for MDH RAA than extrapolation from an oral dosing study.

The screening level inhalation p-RfC is the relevant and technically defensible concentration for use in the air permit for Water Gremlin.

Sequential Exposure to TCE Followed by TDCE

MDH states the community near Water Gremlin was exposed to TCE emitted by the facility for years prior to Water Gremlin eliminating use of TCE and switching to TDCE; and the *"TDCE exposure may be cumulative of the TCE exposure because both are industrial chlorinated solvents."* This is an overly broad statement with no basis in the health effects literature. MDH does not offer any human or laboratory animal studies, comparison of toxicokinetics or mode of action or epidemiological data that would support this speculation. Neither TCE nor TDCE bioaccumulate and both are quickly metabolized and excreted through the lungs and kidneys. Moreover both have a relative short half-life in air (5 to 12 days for TDCE and 7 days for TCE). MDH does not provide evidence or discussion as to how the low levels of TDCE measured in the air at the Water Gremlin facility ambient monitoring locations increase the inferred risk from previous air emissions of TCE. In fact, in their April 2022 Water Gremlin Public Health Assessment: Public Comment Draft, MDH concludes that *"past or current t-DCE ...air emissions are not expected to harm people's health."* Thus, their own evaluation appears to contradict any statements regarding sequential exposure.

COVID-19 May Exacerbate the Effects of TDCE Exposure

Considering the conclusion of no past or current harm to people's health from TDCE, it is difficult to understand the origin of this MDH speculation. MDH does not present evidence specific to potential interactions between TDCE (or closely related chemicals) and any aspect of COVID-19 transmission or severity of disease outcomes. The articles MDH references are general in nature and more relevant to the distribution of ubiquitous air pollutants such as nitrogen oxides and population density. The studies MDH references in their July 13, 2022, memo to MPCA were available prior to publication of their April 2022 Water Gremlin Public Health Assessment: Public Comment Draft. If this was a genuine concern, why did MDH not include a discussion? Such a statement would of course apply to all similar chemicals in air, which in theory should prompt revision of emission limits for all facilities using similar chemicals in their industrial processes.

Public Health would be Protected

Water Gremlin disagrees with MDH's numerous arguments that public health would not be protected if the screening level p-RfC (EPA 2020) was the basis for air emissions limits for TDCE rather than the MDH RAA extrapolated from the CalEPA OEHHA (2018) revised oral RfD. There is no rational or scientific basis for this conclusion. EPA considers p-RfCs to be appropriately protective of public health and uses these values in risk assessments at sites all over the country.

At one point in their July 13, 2022, memo MDH noted that a previously published inhalation PPRTV (EPA 2006) RfC value was withdrawn from the electronic library in 2014 because the EPA (2010) toxicological review concluded that the key study (an inhalation study with rats conducted by Freund et al. 1977 as cited by EPA (2010)) was not adequate to support derivation of an inhalation RfC. MDH expressed concern that the current (EPA 2020) PPRTV inhalation value could be withdrawn at some time in the future. This is unhelpful. One could as easily say that the extrapolated CalEPA data relied upon by the MDH could be withdrawn at some time in the future.

MDH implies that because their route-to-route extrapolated RAA (MDH 2020a) subchronic ($200 \mu\text{g}/\text{m}^3$) and chronic ($20 \mu\text{g}/\text{m}^3$) values for TDCE are lower than the EPA (2020) PPRTV subchronic ($400 \mu\text{g}/\text{m}^3$) and chronic ($40 \mu\text{g}/\text{m}^3$) values, that they are more protective of public health. This conclusion does not follow from the process used to develop RfDs and RfCs from the toxicology and health effects database. In addition, this assertion obscures the layers of protectiveness built into EPA's process for deriving RfD and RfC values starting with the POD from the critical effect in the key study selected to support the toxicity factors. As mentioned previously, EPA (2010 and 2020) and CalEPA OEHHA (2018) used the versions of BMDS software that best fit the data for the critical effect in the key studies to derive a POD for subsequent derivation of the oral RfD and inhalation p-RfC. In each case, the POD was adjusted downward by the application of uncertainty factors (UFs) to account for the quality of the data: UF = 10 for extrapolation from a 90 day chronic study to a lifetime chronic exposure; UF = 10 extrapolation of laboratory animal data to humans; UF = 10 for variable sensitivity of members of the human population; and UF = 3 for deficiencies and gaps in the database such as lack of a multi-generation study. Both the oral RfD (EPA 2010 and OEHHA 2018) and the PPRTV p-RfC (EPA 2020) represent levels of exposure **3,000 times lower** than the lowest exposure level for the critical effect in the key animal study, the Shopp et al. 1985 mouse drinking water study and the DuPont/Kelly 1998 inhalation study with rats. MDH has not offered any data or studies to support a conclusion that the EPA PPRTV is not protective of public health.

The key difference here is that only the PPRTV p-RfC is directly relevant to inhalation of TDCE in ambient air; and therefore should be used as the basis for air emissions limits in the Water Gremlin facility permit.

References and Documents Cited

US EPA (EPA), 1994. Methods for Derivation of Inhalation Reference Concentrations and Application of Inhalation Dosimetry. EPA/600/8-90/066F. October.

EPA, 1996. Soil Screening Guidance: Technical Background Document. EPA/540/R95/128. May.

EPA, 2010. Toxicological review of cis-1,2-dichloroethylene and trans-1,2-dichloroethylene (CAS nos. cis 156-592-5; trans 156-60-5; mixture 540-59-0). In support of summary information on the Integrated Risk Information System (IRIS). September. Available on-line at:

https://cfpub.epa.gov/ncea/iris/iris_documents/documents/toxreviews/0418tr.pdf

EPA, 2012. Benchmark Dose Technical Guidance. EPA/100/R-12/001. June. Available on-line at:

https://www.epa.gov/sites/default/files/2015-01/documents/benchmark_dose_guidance.pdf

EPA, 2014. Superfund Health Risk Technical Support Center Memorandum dated June 17, 2014 from Scott Wessekamper. "Removal of the trans-1,2-dichloroethylene (CASRN 156-60-5) Provisional Peer Reviewed Toxicity Value (PPRTV) assessment from the Electronic Library.

EPA, 2020. Provisional Peer Reviewed Toxicity Values for Trans-1,2-dichloroethylene. EPA/690/R-20/006F. September.

EPA, 2022. Benchmark Dose Software Models. Available on-line at: <https://www.epa.gov/bmds/about-benchmark-dose-software-bmds>

Minnesota Department of Health (MDH). 2020a. Air Toxicological Summary for: trans-1,2-dichloroethylene. Health Based Guidance for Air. May. Available on-line at:

<https://www.health.state.mn.us/communities/environment/risk/docs/guidance/air/tdcesumm.pdf>

MDH, 2020b. Water Gremlin. Health Assessment Series I. Trans-1,2-dichloroethylene in air and health. Available on-line at:

<https://www.health.state.mn.us/communities/environment/hazardous/docs/sites/ramsey/wgtdceairhealth.pdf>

MDH, 2022a. Water Gremlin Public Health Assessment: Public Comment Draft, April 2022. Available on-line at:

<https://www.health.state.mn.us/communities/environment/hazardous/docs/sites/ramsey/phapubliccomment.pdf>

MDH. 2022b. Attachment 9. MDH trans-1,2-dichloroethylene Risk Assessment Advice Follow-up. Memo from James Kelly, Manager, Environmental Assessment and Surveillance Section, to Kari Palmer, Manager, Air Assessment Section, Minnesota Pollution Control Agency. July 13.