



AI# 1724
ID# 7284

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JAN 10 2023

January 9, 2023

Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

Re: Capped Permit Application and Request to Revoke Permit 08300007-003 for the Marshall, MN Terminal

Dear MPCA Permitting Staff,

Magellan Pipeline Co, L.P. (Magellan) hereby submits the following application for a Capped Permit. Magellan is also requesting to terminate coverage for the Marshall Terminal under the existing Permit 08300007-003 upon issuance of the new Capped Permit. Actual emissions, as shown in the recently submitted 2021 annual emissions inventory, remain well below the thresholds allowed under the Capped Permit, and no projects are planned that will prevent Capped permit eligibility.

The facility is subject to two New Source Performance Standards under 40 CFR Part 60 (NSPS), specifically 40 CFR 60 Subpart XX (NSPS for Bulk Gasoline Terminals) and 40 CFR 60 Subpart Kb (Organic Liquid Storage Vessels). Both NSPS Subparts Kb and XX are allowable under the Capped Permit program.

The facility is an area source of HAPs and is subject to 40 CFR 63 Subpart BBBBBB (NESHAP for gasoline distribution bulk terminals, bulk plants, and pipeline facilities) and 40 CFR Subpart ZZZZ (NESHAP for Reciprocating Internal Combustion Engines). 40 CFR 63 Subpart BBBBBB and Subpart ZZZZ do not require the source to obtain a part 70 or 71 permit (per §63.11081(b)). Therefore, Magellan remains eligible for a Capped Permit in place of the Marshall Terminal's existing permit.

Should you have any questions regarding this application, please contact me at Brandy.Chappelle@magellanlp.com or (918) 574-7747. Alternatively, you may contact Al Reich at areich@barr.com or at (218) 529-7144.

Sincerely,

Brandy Chappelle
Environmental Air Specialist
Magellan Pipeline Co L.P.

cc: Eddie Heck, Magellan
Al Reich, Barr Engineering Company

Enclosures: Permit application (1 signed hard copy with USB drive containing electronic copies of files)
Permit application fee (\$1,140)

Request to Void Permit 08300007-003 and Application for Capped Permit

Magellan Pipeline Co, L.P.



July 2022



Request to Void Permit 08300007-003 and Application for Capped Permit

Magellan Pipeline Co, L.P.



July 2022

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1.0 Introduction

Magellan Pipeline Co, L.P. (Magellan) currently operates the Marshall Terminal in Lyon County, Minnesota under Air Emission Permit No. 08300007-003 and is subject to 40 CFR 60 Subpart Kb, 40 CFR 60 Subpart XX, 40 CFR Part 63 Subpart BBBB and 40 CFR Part 63 Subpart ZZZZ. After evaluating historical actual emissions, Magellan has concluded that the Marshall Terminal will qualify for a Capped Permit, based on the following items:

1. Actual emissions have been less than the thresholds allowed under the Capped Permit, as confirmed by the 2021 annual emission inventory and previous years' submittals.
2. The facility is subject to New Source Performance Standards under 40 CFR Part 60 (specifically Subparts Kb and XX), which are allowable under the Capped permit program.
3. The facility is an area source of hazardous air pollutants (HAPs) and is subject to 40 CFR 63 Subpart BBBB (NESHAP for Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities) and 40 CFR 63 Subpart ZZZZ (Reciprocating Internal Combustion Engines).
4. 40 CFR 63 Subpart BBBB and ZZZZ do not require the source to obtain a part 70 or 71 permit (per 63.11081(b)).

Therefore, Magellan is submitting this application package to terminate coverage under the existing Air Emission Permit No. 08300007-003 and apply for a Capped Permit. Official termination will be completed through the Minnesota Pollution Control Agency's (MPCA) e-Services portal in coordination with the MPCA as this application is processed.

2.0 Source and Process Description

The Marshall Terminal is located at 1601 West College Drive, Marshall, MN, in Lyon County. The terminal is a bulk petroleum products distribution center, owned and operated by Magellan. The terminal normally operates 24 hours per day, seven days per week, 52 weeks per year. The property covers approximately 40 acres, and consist of four fixed roof storage tanks, seven internal floating roof storage tanks, a loading rack, a vapor combustion unit (VCU) for controlling volatile organic compounds (VOC) from the loading operations, an office building, and several storage buildings. The terminal distributes various grades of unleaded gasoline and distillate fuel oil. The quantity of products depends on the time of the year and the commercial demand for each product. The terminal receives petroleum products via pipeline, stores the products in above ground storage tanks, and then blends them with various additives in line when it is distributed through a loading rack to tanker trucks for delivery to local retailers. Vapors from the loading rack are controlled by the VCU. The terminal also operates a dual fuel-fired reciprocating internal combustion engine to support pipeline pumping operations.

A process flow diagram is included on the appropriate application form in Section 6.0. Facility-wide actual emissions are included in Attachment 1.

Table 2-1 depicts the emissions sources located at the facility. Additional details on each unit are included in the following sections.

Table 2-1 Emission Sources

ID	Description	Product	Control Method	Regulatory Applicability
TK 001 (Tank 427)	Internal Floating Roof	Ethanol	N/A	NSPS Kb
TK 002 (Tank 670)	Internal Floating Roof	Gasoline	N/A	MACT BBBBBB
TK 003 (Tank 671)	Internal Floating Roof	Distillate	N/A	N/A
TK 004 (Tank 672)	Internal Floating Roof	Gasoline	N/A	MACT BBBBBB
TK 005 (Tank 673)	Fixed Roof Tank	Distillate	N/A	N/A
TK 006 (Tank 674)	Internal Floating Roof	Gasoline	N/A	MACT BBBBBB
TK 007 (Tank 675)	Internal Floating Roof	Distillate	N/A	N/A
TK 008 (Tank 676)	Internal Floating Roof	Distillate	N/A	N/A
TK 009 (Tank 758)	Fixed Roof Tank	Distillate	N/A	N/A
TK 010 (Tank 759)	Fixed Roof Tank	Distillate	N/A	N/A
TK 011 (Relief Tank)	Fixed Roof Tank	Gasoline	N/A	MACT BBBBBB
EU 001	Loading Rack-Gasoline Loading	Gasoline or distillate blended with biodiesel, ethanol, or other additives	Vapor Combustion Unit	MACT BBBBBB NSPS XX

EU 002	Dual-Fuel Engine #1- Reciprocating CI Engine	Natural gas and diesel-fired engine	Catalytic Oxidizer	MACT ZZZZ
EU 003	Soil Treatment Unit REMOVED FROM TERMINAL	Soil Vapor	N/A	N/A
FS 001	Fugitive Components	Gasoline or Distillate	N/A	MACT BBBBBB

2.1 Truck Loading Rack

The truck loading rack can load two trucks simultaneously with an average of three trucks per hour loaded at the terminal. Total organic compounds (TOC) from the truck loading rack must not exceed 80 mg/L in order to remain in compliance with 40 CFR 63 Subpart BBBBBB and more restrictively 35 mg/L for compliance with 40 CFR 60 Subpart XX. This limit is met by operating the VCU and loading rack in accordance with manufacturer specifications. Not only is the truck loading rack equipped with a vapor combustion unit designed to burn vapors displaced from cargo tanks during product loading, but only cargo tanks that meet the necessary vapor tightness requirements of 40 CFR 63 Subpart BBBBBB and 40 CFR 60 Subpart XX are loaded.

2.2 VCU and Loading Rack Collection System

The Marshall Terminal operates a VCU on the loading rack. Per 63.11088(a) and 60.502(b), the terminal must reduce emissions of TOC to ultimately less than or equal to 35 mg/L of gasoline loaded into gasoline cargo tanks at the loading rack. The VCU is operated 100% of the time the loading rack is in operation in accordance with federally enforceable requirements which effectively limit the PTE as defined in Minn. R. 7005.0100, subp. 35a. The terminal completed performance testing in 2017 to verify compliance with emission and operating requirements set forth in Air Emission Permit No. 08300007-003. The terminal operates the VCU and collection system in accordance with the applicable regulatory standards, manufacturer specifications, and operating parameters established during the performance test.

2.3 Aboveground Storage Tanks

The Marshall Terminal contains four fixed roof aboveground storage tanks and seven internal floating roof aboveground storage tanks for product storage with a combined capacity of 7,650,000 gallons. Tanks 673, 758 and 759 are fixed roof tanks used to store distillate fuel. Tanks 670, 672 and 674 are internal floating roof tanks used to store gasoline. Tanks 671, 675 and 676 are internal floating roof tanks used to store distillate. Tank 427 is an internal floating roof tank that stores ethanol and is subject to 40 CFR 60 Subpart Kb. The floating roof tanks storing gasoline are operated and maintained in accordance with 40 CFR. 63, Subpart BBBBBB.

The terminal also operates an 8,000 barrel pipeline relief tank.

2.4 Reciprocating Internal Combustion Engine

The Marshall Terminal operates a dual fuel engine that runs the mainline pump, this engine can operate using natural gas or distillate fuels. The engine is a non-emergency reciprocating internal combustion engine controlled with a catalytic oxidizer. The engine is operated and maintained in accordance with 40 CFR 63, Subpart ZZZZ.

2.5 Insignificant Activities

The Marshall Terminal also includes smaller fixed roof additive and biodiesel tanks and operates biodiesel, butane, and ethanol unloading operations which all qualify as insignificant activities. All other equipment such as boilers, compressors, or vacuums are either electric or used for activities that are not required to be considered when determining the terminal emissions as outlined in Minn. R. 7007.1300 Subp.1A.

3.0 Regulatory Applicability

This section describes the regulatory applicability of primary Federal and State air quality rules to this Facility.

3.1 Federal New Source Review (NSR)/Prevention of Significant Deterioration (PSD)

Lyon County is designated as "in attainment" or "unclassifiable" for the National Ambient Air Quality Standards for all criteria pollutants: carbon monoxide (CO), lead (Pb), nitrogen oxides (NO_x), ozone (O₃), particulate matter less than 2.5 microns in diameter (PM_{2.5}), particulate matter less than 10 microns in diameter (PM₁₀), and sulfur dioxide (SO₂). Minnesota is a delegated state for the PSD program.

With respect to PSD, a "major stationary source" is one that:

[1] has the potential-to-emit (PTE) 100 tpy or more of any criteria pollutant for a facility that is one of the 28 industrial source categories listed in 40 CFR 52.21(b)(1)(i)(a); or

[2] has the PTE 250 tpy or more of any criteria pollutant if the facility is not on the list of industrial source categories.

The Marshall Terminal has a storage capacity of 200,000 barrels which is below the threshold listed 40 CFR Part 52.21 (2)(b)(1)(iii) for a stationary source's required to be included in PSD determination. Therefore, the facility is not currently a "major stationary source" for PSD purposes.

3.2 Federal New Source Performance Standards (NSPS)

NSPS are applicable to certain categories of affected facilities that are constructed, modified, or reconstructed and that meet other applicability criteria on or after a compliance date upon which a relevant subpart applies. The Marshall Terminal is subject to 40 CFR 60 Subp. XX – Standards of Performance for Bulk Gasoline Terminals. The Marshall Terminal's VCU is used to meet the applicable requirements of 40 CFR 60 Subp. XX. All required notifications and compliance demonstrations for Subp. XX have been submitted, and no new actions are required as part of this permitting action.

Tank 427 (TK 001), which stores ethanol, was constructed in 1997 and met all other applicability requirements of 40 CFR 60 Subp. Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984. All required notifications and compliance demonstrations for Subp. Kb have been submitted, and no new actions are required as part of this permitting action.

There are no other affected sources subject to NSPS.

3.3 Federal National Emission Standards for Hazardous Air Pollutants (NESHAP)

No NESHAP standards (40 CFR Part 61) were found to apply to the Marshall Terminal.

3.4 Federal Maximum Achievable Control Technology (MACT) Standards

The Marshall Terminal will accept the HAP limits specified in the Capped Permit Option 2 (≤ 8 tons per year for each HAP and ≤ 20 tons per year for all HAPs combined). Actual HAP emissions in 2021 were 0.86 tpy for combined HAPs, and 0.23 tpy for n-hexane as the highest single HAP.

40 CFR 63 Subpart BBBBBB (National Emission Standards for Hazardous Air Pollutants Area Source Standards for Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities) and Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants Area Source Standards for Reciprocating Internal Combustion Engines) are applicable to the terminal.

All required compliance demonstrations for Subpart BBBBBB and Subpart ZZZZ have been already submitted, and no changes to original compliance submittals are required as part of this permitting action.

3.5 Minnesota Capped Permit Eligibility

The Marshall Terminal meets the eligibility criteria for a Capped Permit as required under Minn. R. 7007.1140 Subp. 1 specifically:

- The 12-month rolling sum of actual emissions at the stationary source for each pollutant are less than or equal to the thresholds in Minn. R. 7007.1141 as demonstrated by the Marshall Terminal's air compliance records and annual emission inventories.
- The facility does not anticipate making changes in the next year which will cause the facilities 12-month rolling to exceed applicable thresholds
- The facility has shown compliance with ambient air quality using the SCREEN3 tool (allowable under Minn. R. 7007.1148 subpart 3)

Additionally, the Marshall Terminal does not meet any of the general ineligibility requirements listed under Minn. R. 7007.1140 Subp. 2. That is, the terminal:

- Is not required to obtain a permit under any of the specifically listed programs therein,
- Is not subject to requirements of a state implementation plan
- Is only subject to new source performance standards on the list contained in Minn. R. 7007.1140 Subp. 2(E)

Therefore, Magellan has prepared this application package to transition the Marshall Terminal to a Capped permit.

3.6 Minnesota Capped Permit Compliance and Air Rules

The Marshall Terminal will be subject to the compliance requirements of the capped permit program as provided in Minn. R. 7007.1140 for facilities with Capped Permits. Additionally, all other state rules will continue to be complied with, as currently listed in the existing permit No. 018300007-003.

The Marshall Terminal will continue to track monthly tank and loadout product volumes for each product stored and loaded at the terminal to calculate monthly emissions.

3.7 Minnesota Capped Permit Facility Modifications

Magellan understands that modifications or changes to the Marshall Terminal are allowed by this permit without requesting a modification to the permit, provided that the following conditions are evaluated before making the change per Minn. R. 7007.1143 Subp. 3 and Minn. R. 1142 Subp. 1a if an emissions unit subject to a capped permit eligible NSPS is to be added, or an existing unit becomes subject to a capped permit eligible NSPS.

1. Re-evaluate whether the emission limits in the permit can continue to be met.
2. Comply with any NSPS or NESHAP that becomes applicable, specifically:
 - a. Obtaining a Title V permit if the NESHAP requires it, and
 - b. Notifying the MPCA using Form CR-06 if a new NSPS becomes applicable with the information required by Minn. R. 7007.1142 Subp. 1a.

4.0 Emission Calculation Discussion

The primary pollutants of concern are volatile organic compounds (VOC), hazardous air pollutants (HAPs), nitrogen oxides (NO_x), and carbon monoxide (CO). There are also insignificant emissions consisting of PM (particulate matter), PM₁₀ (particulate matter smaller than 10 microns in aerodynamic diameter), PM_{2.5} (particulate matter smaller than 2.5 microns in aerodynamic diameter) from truck traffic.

The primary sources of VOC emissions are routine and non-routine emissions from the storage tanks and emissions from the controlled loadout operations. Facility-wide actual emission calculations for 2021 are provided in Attachment 1. The storage tank emissions have been calculated using the TankESP application. TankESP incorporates the calculation methodology found in US EPA, AP-42, fifth edition, Chapter 7.1 Organic Liquid Storage Tanks (June 2020). Loading rack VOC emissions are calculated based on the emission calculation methodology found in US EPA, AP-42, fifth edition, Chapter 5.2 Transportation and Marketing of Petroleum Liquids (June 2008).

HAPs are speciated components of the VOC emissions generated by the operation of the storage tanks and loading operations. These emissions are calculated primarily based on monthly throughput and loadout volumes, and product types for both the storage tanks and loading rack.

Fugitive VOC emissions have been calculated using EPA Bulletin 453/R-95-017, Protocol for Equipment Leak Emission Estimates, November 1995 using factors from Table 2-3: Marketing Terminal Average

Emission Factors. These emissions are calculated based on total fugitive equipment counts and assume year-round operation. They contribute a nominal amount to overall VOC emissions.

NO_x and CO emissions are emitted from the VCU as result of combusting vapors associated with the loadout operations. They are calculated using emission factors based on vendor guarantees supplied by the manufacturer for each respective pollutant. NO_x, CO, particulate matter, SO₂, and HAPs are also emitted from the dual fuel engine. Emission factors for this unit are based on AP-42, Webfire, and performance testing data as appropriate, and specific details can be found in Attachment 1.

These emissions have been calculated and submitted for the 2021 annual emissions inventory and are supplied here for reference, in addition to being already submitted through the MPCA's Consolidated Emissions Data Repository (CEDR). The Marshall Terminal has operated more than 12 consecutive months, and therefore the most recent year's actual emissions have been included as required by Minn. R. 7007.1140 Subp. 1(A) and Subp. 1(B).

5.0 Capped Permit Application Forms

Certain forms requested historic identification numbers. This table is provided a reference to support identification of all equipment.

SI List

AI ID (Name): 1724 (Magellan Pipeline Co LP - Marshall)
Activity: IND20120001

SI Category	SI Type	Subject Item ID	Delta Designation	Description
Agency Interest	Conventional Site	AI SI 1724	Null	Null
Component Group	Air Component Group	COMG 1	GP001	Aboveground Fuel Tanks
		COMG 2	GP002	Units Subject to 40 CFR pt. 63, Subp. 2222
		COMG 3	GP003	Units Subject to 40 CFR pt. 63, Subp. 888888
Equipment	Aboveground Storage Tank	EQUI 4	TK003	Ethanol; Tank 427
		EQUI 5	TK032	Gasoline; Tank 670
		EQUI 6	TK003	Distillate; Tank 671
		EQUI 7	TK004	Gasoline; Tank 672
		EQUI 8	TK005	Distillate; Tank 673
		EQUI 9	TK006	Gasoline; Tank 674
		EQUI 10	TK007	Distillate; Tank 675
		EQUI 11	TK008	Distillate; Tank 676
		EQUI 12	TK009	Distillate; Tank 758
		EQUI 13	TK010	Distillate; Tank 759
		EQUI 14	TK011	Gasoline 8006619
	Other Construction	EQUI 1	EU001	Loading Rack w/ Vapor Combustor Control - Gasoline Loading
	Pump	EQUI 3	EU003	Soil treatment unit - Other
	Reciprocating Engine	EQUI 2	EU002	Dual-Fuel Engine #1 - Reciprocating CI Engine
Fugitive	Equipment Leaks	FUGI 1	FS001	Valves, Pump Seals, Flanges, and Connectors - Equipment Leaks
Structure	Stack/Vent	STRU 1	SV002	Dual Fuel Engine Stack
		STRU 2	SV001	VCU Stack
Total Facility	Air Quality Total Facility	TFAC 1	08300007	Magellan Pipeline Co LP - Marshall
Treatment	109-Catalytic Oxidizer	TRSA 2	CE002	Catalytic Oxidizer
	131-Thermal Oxidizer	TRSA 1	CE001	Thermal Oxidizer



**Minnesota Pollution
Control Agency**

520 Lafayette Road North
St. Paul, MN 55155-4194

CAP-00

Capped Permit Qualifications Review List

Air Quality Permit Program

Doc Type: Permit Application

Note: You must submit this form as part of your capped permit application package.

AQ Facility ID No.: 08300007

AQ File No.: 1724

Facility Name: Magellan Pipeline Co LP-Marshall Terminal

The following list of questions will help you to determine if you qualify for the capped emission permit. The capped permit contains limitations to keep the potential-to-emit for criteria and hazardous air pollutants below federal permitting thresholds. You can choose between an option 1 and an option 2 capped permit. Option 1 has higher allowable facility-wide emission limits than option 2, but requires tracking of emissions from insignificant activities. Requirements associated with the capped permit can be found in Minn. R. 7007.1140 to 7007.1148. (See <https://www.revisor.mn.gov/rules/?id=7007>.) Other information relating to the capped permit can be found at <http://www.pca.state.mn.us/hqzq483>.

Capped Permit Emission Thresholds for Options 1 and 2

POLLUTANT	Option 1 Threshold (ton/year)	Option 2 Threshold (ton/year)
Hazardous Air Pollutants (HAP)	9.0 tons per year for a single HAP 20 tons per year total for all HAPs	8.0 tons per year for a single HAP 20 tons per year total for all HAPs
Particulate Matter (PM)	90 tons per year	75 tons per year
PM smaller than 10 microns (PM ₁₀)	90 tons per year	75 tons per year
Volatile Organic Compounds (VOC)	90 tons per year	85 tons per year
Sulfur Dioxide (SO ₂)	90 tons per year	90 tons per year
Nitrogen Oxides (NO _x)	90 tons per year	85 tons per year
Carbon Monoxide (CO)	90 tons per year	85 tons per year
Lead (Pb)	0.50 tons/year	0.50 tons/year
Carbon Dioxide Equivalent (CO ₂ e)	90,000 tons/year	85,000 tons/year

Questionnaire

Complete the following questions to determine if your stationary source qualifies for the capped permit. If you do not qualify for the capped permit, you must submit a permit application for a registration, Part 70, General, or State permit before you make a modification to your facility or an installation and operation permit for the modification under Minn. R. 7007.0750, subp. 5. You may not begin actual construction on the modification until the appropriate permit is obtained.

- Which capped permit option are you applying for?
☐ Capped permit Option 1; Go to question 2.
☒ Capped permit Option 2; Go to question 3.
- Will you accept a permit condition to limit actual emissions to less than the Option 1 thresholds listed in the table above based on a 12-month monthly rolling sum?
☐ Yes; go to question 4.
☐ No; your stationary source does not qualify for the capped permit.
- Will you accept a permit condition to limit actual emissions to less than the Option 2 thresholds listed in the table above based on a 12-month monthly rolling sum?
☒ Yes; go to question 5.
☐ No; your stationary source does not qualify for the capped permit.
- Will you accept a permit condition to calculate emissions from those insignificant activities that are quantifiable on a monthly basis? See CAP-IA Insignificant Activities List for more information.
☐ Yes; Go to question 5.
☐ No; evaluate if you will qualify for Option 2; otherwise your stationary source does not qualify for the capped permit.

5. You must perform an ambient air quality assessment as described in Minn. R. 7007.1148 to be eligible for a capped permit. Were the 1-hour, 3-hour, and 24-hour SO₂; the 24-hour PM₁₀; and annual Nitrogen Dioxide (NO₂) concentrations predicted in the assessment at and beyond the property line of your facility lower than the corresponding standard in Minn. R. 7009.0080? See <http://www.pca.state.mn.us/hqzq483> for more information about the assessment.
- ☒ Yes, go to question 6.
- ☐ No; your stationary source does not qualify for the capped permit.
6. In performing the ambient air quality assessment, did you assume any limits or conditions not contained in Minn. R. 7007.1140 to 7007.1148? Note that facilities with significant PM₁₀ emissions, such as those with material handling operations, may have difficulty successfully completing the assessment without taking production or hourly limits not contained in a capped permit.
- ☐ Yes, your stationary source does not qualify for the capped permit.
- ☒ No; go to question 7.
7. Are any of the emission units at your stationary source subject to any New Source Performance Standards other than 40 CFR pt. 60 Subparts Dc, I, K, Ka Kb, DD, EE, GG, SS, XX, JJJ, TTT, IIII, or JJJJ? If you have modified (as defined in 40 CFR § 60.14), reconstructed (as defined in 40 CFR § 60.15) or constructed the described emission source on or after the effective date listed in 40 CFR pt. 60, your stationary source may be subject to the requirements, see CAP-GI-09D Requirements Form.
- ☐ Yes, your stationary source does not qualify for the capped permit.
- ☒ No; go to question 8.
8. Are any of the emission units at your stationary source subject to a National Emission Standards for Hazardous Air Pollutant Sources (NESHAPS) standard other than one of the area source NESHAPS standards listed on Form CAP-GI-09A, question 1 (e.g., halogenated solvent cleaners, chromium plating, etc.)? See CAP-GI-09A Requirements Form for more information.
- ☐ Yes, your stationary source does not qualify for the capped permit.
- ☒ No; go to question 9.
9. Was (is) an environmental review required for your stationary source? (i.e., new stationary sources that have a potential to emit of 100 tons or more of any single air pollutant, and for stationary source modifications that will result in a single pollutant's potential increase in emissions of 100 tons per year or more).
- ☐ Yes; go to question 10.
- ☒ No; go to question 11.
10. Did you assume any specific conditions or limits not contained in Minn. R. 7007.1140 to 7007.1148 in obtaining a negative declaration in an environmental assessment worksheet or as a mitigation measure in an environmental impact statement?
- ☐ Yes; your stationary source does not qualify for the capped permit.
- ☐ No; go to question 11.
11. Is your facility required to obtain a permit under Minn. R. 7007.0200, subp. 3, acid rain affected sources; Minn. R. 7007.0200, subp. 4, solid waste incinerators and waste combustors; Minn. R. 7007.0200, subp. 5, other part 70 sources; Minn. R. 7007.0250, subp. 3, state implementation plan required state permit; or Minn. R. 7007.0250, subp. 6, waste combustors?
- ☐ Yes; your stationary source does not qualify for the capped permit.
- ☒ No; go to question 12.
12. Does your facility produce fuel grade ethanol or is a sector-based state general permit available for the source category your facility is in? (The only sector-based state general permit currently available is for sand and gravel operations.)
- ☐ Yes; your stationary source does not qualify for the capped permit.
- ☒ No; go to question 13.
13. Is your stationary source subject to any State Implementation Plan (SIP) limits or Best Available Control Technology (BACT) limits?
- ☐ Yes; your stationary source does not qualify for the capped permit.
- ☒ No; go to question 14.
14. In qualifying for the capped permit, will you assume the use any control equipment or control efficiencies not contained in the state Control Equipment rule (Minn. R. 7011.0060 to 7011.0080)?
- ☐ Yes; your stationary source does not qualify for the capped permit.
- ☒ No; go to question 15.
15. Have any production limits been imposed on your facility as a result of performance testing?
- ☒ No; your facility qualifies for the capped permit. Complete the remainder of the application forms.
- ☐ Yes; your stationary source does not qualify for the capped permit.



520 Lafayette Road North
St. Paul, MN 55155-4194

Magellan Pipeline

SCP-01: Submittal cover page

Permit application/notification/ determination request fee submittal

Air Quality Permit Program

Doc Type: Permit Application

Instructions on page 6.

1a) AQ Facility ID number: 08300007 1b) Agency Interest ID number: 1724

2) Facility name: Magellan Pipeline Co LP- Marshall Terminal

3) Submittal is (choose from the following options and then complete the remainder of item 3 as directed):

- ☐ The final certified (or recertified) version of a previously-submitted permit application. **Complete Section 3A.**
- ☐ Additional or supplemental information requested by permit staff during the permit-writing process. **Complete Section 3A.**
- ☐ A request that the Minnesota Pollution Control Agency (MPCA) make an applicability determination. **Complete Section 3A.**
- ☐ An application for a new Individual Part 70 or State Permit – **Complete Section 3B:**
- ☐ An application for reissuance of an Individual Part 70 or State Permit – **Complete Section 3B.**

Note: Applications for reissuance must be submitted using the MPCA's e-Services website at <https://www.pca.state.mn.us/data/e-services>. Applications outside of the e-services website will only be accepted if there is a request for confidentiality.

- ☐ An application for an amendment to an existing Individual Part 70 or State Permit – **Complete Section 3B.**
- ☒ An application for a Registration Permit, Capped Permit, or General Permit – **Complete Section 3C.**
- ☐ An application for an administrative change to an existing Registration, Capped, or General Permit – **Complete Section 3C.**
- ☐ A notification required under Minn. R. 7007.1150(C); Minn. R. 7007.1250, subp. 4; Minn. R. 7007.1350; Minn. R. 7007.0800, subp. 10, item B. **Complete Section 3D.**
- ☐ A notification from a hot mix asphalt plant holding a Registration Permit of the intent to incorporate ground tear-off shingles and/or manufacturer scrap shingles in the hot mix asphalt. **Complete Section 3D.**

Section 3A – Request for applicability determination, recertification of a previously-submitted permit application, or supplement to a previously-submitted permit application

Use this section only if your submittal is one of the following:

- The final version of a previously submitted permit application, incorporating changes negotiated through the permitting process, or
- Submittal of additional or supplemental information requested by permit staff during the permit-writing process, or
- A request for the MPCA to make an applicability determination.

For final versions and supplemental information, enter the "tracking number" which can be obtained from the MPCA permit staff working on the permit.

Check one of the boxes below. Do not complete Sections 3B, 3C, or 3D. Continue with item 4 of the form.

Choose one of the following:	Quantity	Points	Total points
<input type="checkbox"/> Recertification of a previously-submitted permit application – tracking number: _____	NA	NA	NA
<input type="checkbox"/> Supplement to a previously-submitted permit application – tracking number: _____	NA	NA	NA
<input type="checkbox"/> An Applicability Determination Request		x 10 =	

Section 3B – Application for an Individual Part 70 or State Permit, reissuance of an Individual Part 70 or State Permit, or amendment of an Individual Part 70 or State Permit

Choose one of the following:

- ☐ This is the original application or replacement for a denied or withdrawn application. Complete the table below.
- ☐ This is the replacement for an application returned as incomplete (not denied) **and** the scope is exactly the same as in the incomplete application. Enter the tracking number of the incomplete application being replaced: _____. A new fee is not required, so completion of the table below is not necessary.
- ☐ This is the replacement for an application returned as incomplete (not denied) **and** the scope is different than the incomplete application. Enter the tracking number of the incomplete application being replaced: _____. Complete the table below.

If your submittal includes notifications that do not require a permit application, also complete Section 3D.

Choose one of the following:

Choose one of the following:			Quantity	Points	Total points
<input type="checkbox"/> Application for an Individual Part 70 Permit				x 75 =	
<input type="checkbox"/> Application for an Individual State Permit				x 50 =	
<input type="checkbox"/> Application for reissuance of an expiring Individual Part 70 or State Permit (does not include modifications to a permit that require an amendment)					
Note: Applications outside of the e-services website will only be accepted if there is a request for confidentiality.					
Expiration date: _____ (mm/dd/yyyy)	Application due date (180 days prior to expiration): _____ (mm/dd/yyyy)		NA	NA	NA
<input type="checkbox"/> Application for a major amendment to an Individual State or Part 70 Permit					
<input type="checkbox"/> Includes reconstruction or modification of a New Source Performance Standards (NSPS) Affected Facility not subject to New Source Review				x 25 =	
<input type="checkbox"/> Application for a moderate amendment to an Individual State or Part 70 Permit				x 15 =	
<input type="checkbox"/> Application for a minor amendment to an Individual State or Part 70 Permit				x 4 =	
<input type="checkbox"/> Application for an administrative amendment to an Individual State or Part 70 Permit.					
For administrative amendments to individual permits, use the MPCA's e-Services website at https://www.pca.state.mn.us/data/e-services . Administrative amendment applications outside of the e-services website will only be accepted if there is a request for confidentiality.				x 1 =	

Additional information (check all that apply):

- ☐ Submittal was preceded by pre-application work with the MPCA (for example: dispersion modeling or modeling protocol review, Air Emission Risk Analysis (AERA) review, environmental review). The tracking number associated with the preapplication work is: _____
Date preapplication work was submitted: _____
- ☐ Permit will replace an existing permit of a different type (e.g., replacing a Capped Permit with an Individual State Permit, or replacing a Part 70 General Permit with an Individual Part 70 Permit).
- ☐ Permit is for construction of a new facility.
- ☐ Permit is required because of a modification to an existing facility, making the facility subject for the first time for the requirement for an Air Emission Permit.
- ☐ Project is subject to Prevention of Significant Deterioration (PSD) (40 CFR § 52.21). Send a complete copy of the application to U.S. Environmental Protection Agency (EPA) Region V (see instructions).
- ☐ Permit is required because of installation or modification of a Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAP) and/or a Part 60 NSPS Affected Facility at a Stationary Source with Potential-to-Emit below all permit thresholds (Minn. R. 7007.0500, subp. 2.C.(1)).

Section 3C – Application for a Registration, Capped, or General Permit

Choose one of the following:

- ☒ This is the original application or replacement for a denied or withdrawn application. Complete the table below.
- ☐ This is the replacement for an application returned as incomplete (not denied) **and** the scope is exactly the same as in the incomplete application. Enter the tracking number of the incomplete application being replaced: _____. A new fee is not required, so completion of the table below is not necessary.
- ☐ This is the replacement for an application returned as incomplete (not denied) **and** the scope is different than the incomplete application. Enter the tracking number of the incomplete application being replaced: _____. Complete the table below.

If your submittal includes notifications that do not require a permit application, also complete Section 3D.

Choose one of the following:	Quantity	Points	Total points
<input type="checkbox"/> Application for a Registration Permit <input type="checkbox"/> Option A <input type="checkbox"/> Option B <input type="checkbox"/> Option C <input type="checkbox"/> Option D		x 2 =	
<input type="checkbox"/> Application for a Capped Permit <input type="checkbox"/> Option 1 <input checked="" type="checkbox"/> Option 2	1	x 4 =	4
<input type="checkbox"/> Application for a Part 70 General Permit <input type="checkbox"/> Manufacturing General Permit <input type="checkbox"/> Low Emitting Facility General Permit		x 4 =	
<input type="checkbox"/> Application for a State General Permit <input type="checkbox"/> Nonmetallic Mineral Processing General Permit		x 3 =	
<input type="checkbox"/> Application for an administrative change to an existing Registration, Capped, or General Permit (e.g., change of facility ownership)		x 1 =	

Additional information (check all that apply):

- ☒ Permit will replace an existing permit of a different type (e.g., replacing a Registration Permit with a Capped Permit; replacing an Option B Registration Permit with an Option D Registration Permit; etc.)
- ☐ Permit is required for construction of a new facility
- ☐ Permit is required because of a modification to an existing facility, making the facility subject for the first time for the requirement for an Air Emission Permit.
- ☐ Permit is required because of a modification or change making the facility ineligible for its existing Air Emission Permit.

Section 3D – Notifications

If your submittal also includes a permit application, then also complete Section 3A, 3B, or 3C as applicable. Check all applicable boxes below, then continue with item 4 of the form.

- ☐ A notification of accumulated insignificant activities (Minn. R. 7007.1250, subp. 4)
- ☐ A notification of installation of pollution control equipment (Minn. R. 7007.1150, item C)
- ☐ A notification of replacement of a unit (Minn. R. 7007.1150, item C)
- ☐ A notification of replacement of controls with listed controls (Minn. R. 7007.1150, item C)
- ☐ A notification of changes that contravene a permit term (Minn. R. 7007.1350)
- ☐ A notification from a hot mix asphalt plant including a request to incorporate ground tear-off shingles and/or manufacturer scrap shingles in the hot mix asphalt (applies to Registration Permits) Minn. R. 7011.0913, subp. 3)

4) Total points ("total points" from Section 3A, 3B, or 3C) 4

5) Total application fee 4 x \$285 = \$ 1140
(total points from item 4) (fee amount)

The application fee amount is \$285 per point, payable to the MPCA. Send your payment ("fee amount") with your submittal. The fee is not refundable, per Minn. R. 7002.0016, subp. 1. There may be additional fees assessed during processing of your request, as required by Minn. R. ch. 7002.

Note: If an application is resubmitted for a different type of amendment or permit, the original fee is not refundable nor transferable. The resubmitted application fee must be paid in full.

6a) Confidentiality statement

- ☒ This application does not contain material claimed to be confidential under Minn. Stat. §§ 13.37, subd. 1(b) and 116.075. Skip item 6b, go to item 7.
- ☐ This application contains material which is claimed to be confidential under Minn. Stat. §§ 13.37, subd. 1(b) and 116.075. Complete item 6b. Your submittal must include both Confidential and Public versions of your application.

Registration Permit applicants may not claim any portion of their application as confidential. If applying for a Registration Permit or an administrative change to a Registration Permit, you must check the first box above ("This application does not contain.....").

☐ Confidential copy of application attached ☐ Public copy of application attached

6b) Confidentiality certification

To certify data for the confidential use of the MPCA, a responsible official must read the following, certify to its truth by filling in the signature block on the following page, and provide the stated attachments.

- ☐ I certify that the enclosed permit application(s) and all attachments have been reviewed by me and do contain confidential material. I understand that only specific data can be considered confidential and not the entire application or permit. I certify that I have enclosed the following to comply with the proper procedure for confidential material:
- ☐ I have enclosed a statement identifying which data contained in my application I consider confidential, and I have explained why I believe the information qualifies for confidential (or non-public) treatment under Minnesota Statutes.
 - ☐ I have explained why the data for which I am seeking confidential treatment should not be considered "emissions data" which the MPCA is required to make available to the public under federal law.
 - ☐ I have enclosed an application containing all pertinent information to allow for completion and issuance of my permit. This document has been clearly marked "confidential".
 - ☐ I have enclosed a second copy of my application with the confidential data blacked out (not omitted or deleted entirely). It is evident from this copy that information was there, but that it is not for public review. This document has been clearly marked "public copy".

Permittee responsible official:

Print name: _____

Title: _____

Signature: _____

Date (mm/dd/yyyy): _____

Co-Permittee responsible official (if applicable)

Print name: _____

Title: _____

Signature: _____

Date (mm/dd/yyyy): _____

7) Submittal certification

I certify under penalty of law that the enclosed documents and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I also certify, in accordance with Minn. R. 7007.0500, subp. 2 (K)(2) and subp. 2 (K)(3), that I have reviewed the procedures implemented by my facility to maintain compliance and that those procedures are, to the best of my knowledge and belief, reasonable to maintain compliance with all applicable requirements, including those that will become applicable during the term of the permit.

I also certify, in accordance with Minn. R. 7007.1450, subp. 4(D), that if this application requests the use of the minor or moderate permit amendment procedures, the proposed change is not part of a larger project which, taken as a whole, would not qualify for treatment as a minor or moderate permit amendment.

Choose one of the following:

- ☒ I certify that no construction is associated with the permit action sought by this permit application.
- ☐ I certify that my project includes construction, but construction has not yet been started except as allowed under Minn. R. 7007.1110, subp. 10 or Minn. R. 7007.1250, subp. 4, and will not begin until the permit is issued except as allowed under Minn. R. 7007.1110, subp. 12; Minn. R. 7007.1142, subp. 2; Minn. R. 7007.1150, item C; or Minn. R. 7007.1450, subp. 7.
- ☐ My project includes construction, and construction other than what is allowed under Minnesota Rules has been started

Permittee responsible official:

Print name: Jeff Myers

Title: Director of Operations

Signature: _____

Date (mm/dd/yyyy): _____

Co-Permittee responsible official (if applicable)

Print name: _____

Title: _____

Signature: _____

Date (mm/dd/yyyy): _____



**Minnesota Pollution
Control Agency**

520 Lafayette Road North
St. Paul, MN 55155-4194

CAP-GI-01

Facility Information for Capped Permits

Air Quality Permit Program

Doc Type: Permit Application

Instructions on Page 3

1a) AQ Facility ID No.: 08300007 1b) AQ File No.: 1724

2) Facility Name: Magellan Pipeline Co LP-Marshall Terminal

3) Facility Location

Street Address: 1601 West College Drive

City: Marshall County: Lyon County Zip code: 56258

Note: If the facility is or will be located within the city limits of Minneapolis, attach a map showing the exact location.

Mailing Address: 1601 West College Drive

City: Marshall State: Lyon County Zip code: 56258

4) Corporate/Company Owner

Name: Magellan Pipeline Co LP

Mailing Address: One Williams Center, OTC-8

City: Tulsa State: OK Zip code: 74172

Owner Classification: ☒ Private ☐ Local Govt. ☐ State Govt. ☐ Federal Govt. ☐ Utility

5) Corporate/Company Operator (if different than owner)

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip code: _____

6) Co-permittee (if applicable)

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip code: _____

7) Legally responsible official for this permit/facility

Mr/Ms: Jeff Myers Phone: (913) 310-7730

Title: Director of Operations Fax: _____

At (check one): ☐ Owner Address ☐ Operator Address ☐ Emission Facility Address

☒ Other (specify): 13424 W 98th St. Shawnee Mission, KS 66215

8) Contact person for this permit

Mr/Ms: Brandy Chappelle Phone: (918) 574-7747

Title: Environmental Air Specialist Fax: _____

At (check one): ☒ Owner Address ☐ Operator Address ☐ Emission Facility Address

☐ Other (specify): _____

E-mail address: Brandy.Chappelle@magellanlp.com

9) All billings for annual fees should be addressed to:

Mr/Ms: Brandy Chappelle Phone: (918) 574-7747

Title: Environmental Air Specialist Fax: _____

At (check one): ☒ Owner Address ☐ Operator Address ☐ Emission Facility Address

☐ Other (specify) _____

10) Standard Industrial Classification (SIC) Code and description, and North American Industry Classification System (NAICS) code and description for the facility:

Primary: 4613 / Refined Petroleum Pipelines

Secondary (if applicable): _____ / _____

Tertiary (if applicable): _____ / _____

Primary NAICS code: _____ / _____

11) Primary product produced (or activity performed) at the facility is:

The Facility is a bulk petroleum products terminal.

12) Facility is: ☒ Stationary ☐ Portable

13) Check the one that applies best to your facility:

- ☐ New facility planned or under construction (first permit application)
- ☒ Existing facility, currently operating under Air Emission Permit No. 08300007-003
- ☐ Existing facility, but have never had an Air Emission Permit issued by the MPCA

14) (Reserved for future use)

15) Is environmental review required (either an Environmental Assessment Worksheet (EAW) or an Environmental Impact Statement (EIS)) for this facility?

- ☐ Yes ☒ No

Note: If you answered "Yes" to this question, you may also be required to perform an Air Emissions Risk Assessment (AERA). Please call 800-657-3864 or 651-296-6300.

16) Are you required to submit a Toxics Release Inventory (Form R) under SARA Title 313 for this facility? Call the Minnesota Emergency Planning and Community Right-to-Know Act (EPCRA) Program for more information (651-201-7400).

- ☐ Yes ☒ No

17) Is this facility within 50 miles of another state or the Canadian border:

- ☐ Yes (specify which ones) _____ ☒ No

18) Brief description of the facility or proposed facility to be permitted (attach additional sheet if necessary):

The Permittee owns and operates a bulk petroleum terminal, pipeline and storage facility in Marshall, MN. This facility provides approximately 200,000 barrels of storage capacity. The main emission sources at the plant are the loading rack/vapor collection and control system, the dual fuel engine running the mainline pump, the product storage tanks and fugitive emissions. Petroleum products are also shipped by tank trucks to retailers and bulk stations. The terminal operates 24 hours per day, 365 days per year. VOCs are the major source of air emissions from this facility.

19) (Reserved for future use)

20) Person preparing this permit application:

Mr./Ms. Al Reich

Title: Senior Chemical Engineer

E-mail address: areich@barr.com

Phone: 715-817-3628

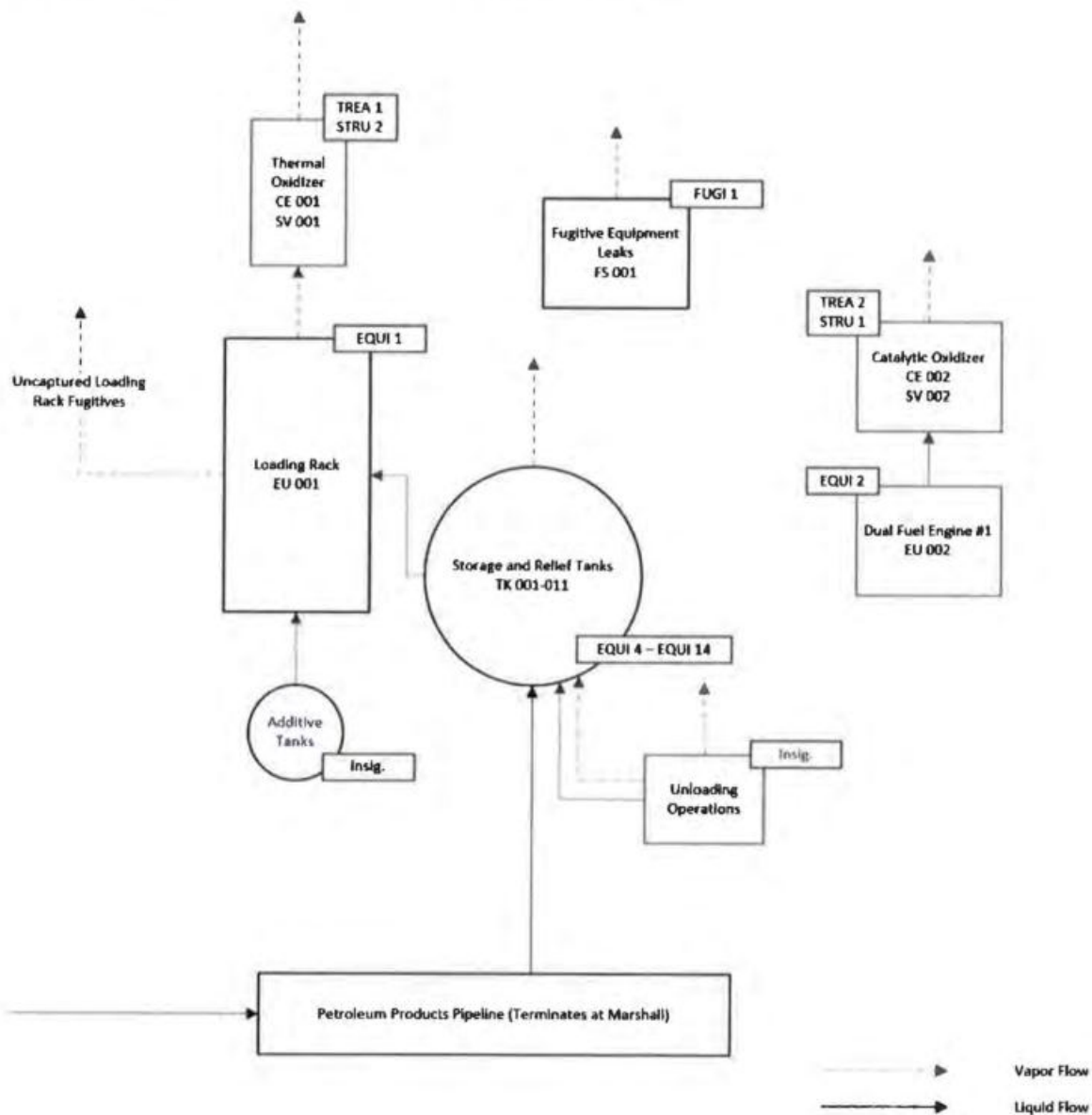
Fax: _____

Date: July 11, 2022

Instructions for Form CAP-GI-01

- 1a) **AQ Facility ID No.** -- Fill in your Air Quality (AQ) Facility Identification (ID) Number (No.). This is the first eight digits of the permit number for all new permits issued under the current operating permit program. If your facility has never been issued a permit under this program, leave this line blank.
- 1b) **AQ File No.** -- Fill in your AQ File Number. This is the first group of characters in your current Air Emission Facility Permit. For example, for permit number 1899AB-93-OT-1, the AQ Facility ID number would be 1899AB. If you have never had an air quality permit, leave this line blank.
- 2) **Facility Name** -- Enter your facility name.
- 3) **Facility Location** -- Fill in the facility's street address and the city and county where the facility is located. Also indicate the facility's mailing address. You may use a P.O. Box number for the mailing address, but not for the street address. If the facility is or will be located within the limits of the city of Minneapolis, include a map showing the exact location of the facility.
- 4) **Corporate/Company Owner** -- Fill in the owner name and mailing address. The owner receives the air emission permit from the MPCA. The owner is the "Permittee". Check the one "owner classification box" that most closely describes your facility.
- 5) **Corporate/Company Operator (if different from owner)** -- The operator runs the facility on a day-to-day basis. If a separate management company operates the facility, its name goes here. The operator is also a "Permittee". Fill in if applicable; if not, fill in "N/A".

- 1a) AQ Facility ID number: 08300007
- 1b) Agency Interest ID number: 1724
- 2) Facility name: Magellan Pipeline Co LP- Marshall Terminal
- 3) Flow diagram: (insert flow diagram below or attach a separate sheet)





Minnesota Pollution Control Agency

AIR QUALITY
520 LAFAYETTE ROAD NO., ST. PAUL, MN 55155-4194

PERMIT APPLICATION FORM **CAP-GI-03**
**FACILITY AND STACK/VENT
DIAGRAM**

10/7/04

-
- 1) AQ Facility ID No.: **08300007**
-
- 2) Facility Name: **Magellan Pipeline Co LP-Marshall Terminal**
-
- 3) Facility and Stack/Vent Diagram:



Minnesota Pollution Control Agency

AIR QUALITY
520 LAFAYETTE ROAD NO., ST. PAUL, MN 55155-4194

PERMIT APPLICATION FORM **CAP-GI-03**
**FACILITY AND STACK/VENT
DIAGRAM**

10/7/04

- 1) AQ Facility ID No.: **08300007**
- 2) Facility Name: **Magellan Pipeline Co LP-Marshall Terminal**
- 3) Facility and Stack/Vent Diagram:

SEE FIGURE ON FOLLOWING PAGE

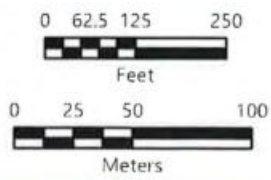
Bar Footer: ArcGIS 10.8.1, 2022-04-07 08:54 File: \\Client\\Magellan Midstream\\Work Orders\\Marshall 23071040\\Map\\Clipped Air Permit\\Figure 1 CAP-GI-03 Facility Diagram.mxd User: MRO



Notes:
Fugitive Components (FS 001) throughout the facility.
Building roof heights on facility are approximately 20 feet.



- Facility Boundary
- Emission Point
- Insignificant Activities



CAP-GI-03
FACILITY DIAGRAM
Magellan Pipeline Co LP – Marshall
Magellan Midstream Partners, L.P.
Marshall, MN
FIGURE 1



520 LAFAYETTE ROAD NO., ST. PAUL, MN 55155-4194

STACK/VENT INFORMATION

3/7/06

2) Facility Name:

Magellan Pipeline Co LP-Marshall Terminal

[illegible]



Air Quality Permit Program

Doc Type: Permit Application

1b) AQ File No.: 1724

2) Facility Name: Magellan Pipeline Co LP-Marshall Terminal

www.pca.state.mn.us • 651-296-6300 • 800-657-3864 • TTY 651-282-5332 or 800-657-3864 • Available in alternative formats
aq-f10-capsi05a • 9/12/13 Page 1 of 3



520 Lafayette Road North
St. Paul, MN 55155-4194

CAP-GI-05B

Emission Unit Information

Air Quality Permit Program

Doc Type: Permit Application

Instructions on page 2.

1a) AQ Facility ID number: 083000007

1b) Agency Interest ID number: 1724

2) Facility name: Magellan Pipeline Co LP-Marshall Terminal

3) Fill in a column in the table below for each emission unit (EU/EQUI). Form GI-05F Emission Source Association must also be submitted whenever this form is required.

3a) Emission unit ID number	001	002	
3b) Emission unit type	Gasoline Loading	Reciprocating IC Engine	
3c) Emission unit operator's description	Loading Rack	Dual-Fuel Engine	
3d) Manufacturer	Owner/Manufacturer	Owner/Manufacturer	
3e) Model number	GV-2TOF-8500-2	538	
3f) Max design capacity, material and units	41.95 units: E3Gal/Hr material: Gasoline Vapors	7.06 units: MBTU/Hr material: Heat	units: / material: /
3g) Commence construction date (mm/dd/yyyy)	6/1/1996 <input type="checkbox"/> to be determined	12/31/1946 <input type="checkbox"/> to be determined	<input type="checkbox"/> to be determined
3h) Initial startup date (mm/dd/yyyy)	1/1/1996 <input type="checkbox"/> to be determined	12/31/1946 <input type="checkbox"/> to be determined	<input type="checkbox"/> to be determined
3i) Modification or reconstructed date (mm/dd/yyyy)			
3j) Firing method			
3k) Engine use			
3l) Engine displacement	Units:	Units:	Units:
3m) Subject to CSAPR?			
3n) Electric generating capacity (megawatts)			
3o) SIC code	5171	5171	
3p) Status	Active	Active	
3q) Removal date (mm/dd/yyyy)			



Minnesota Pollution Control Agency

AIR QUALITY
520 LAFAYETTE ROAD NO., ST. PAUL, MN 55155-4194

PERMIT APPLICATION FORM CAP-GI-05C TANK INFORMATION 3/7/06

1) AQ Facility ID No.: **083000007** 2) Facility Name: **Magellan Pipeline Co LP-Marshall Terminal**

3a) Tank ID No.	3b) Control Equip ID No.	3c) Product(s) Stored	3d) Interior Height (ft.)	3e) Interior Diameter (ft.)	3f) Capacity (1000 gals.)	3g) Construc- -tion Type	3h) Support Type (floating roof only)	3i) Number of Columns (column- supported only)	3j) Column Diameter (column- supported only, in ft.)	3k) Deck Type (floating roof only)	3l) Seal Type (floating roof only)	3m) Date Installed or Constructed
001		Ethanol; Tank 427	24	36	252	4. Internal	1. Self-sup			1. Welded	3. Mecha	
002		Gasoline; Tank 670	40	60	708	4. Internal	2. Column s	1	1	7. Bolted,	7. Resilie	
003		Distillate; Tank 671	40	60	708	4. Internal	2. Column s	1	1	7. Bolted,	7. Resilie	
004		Gasoline; Tank 672	40	60	708	4. Internal	2. Column s	1	1	7. Bolted,	7. Resilie	
005		Distillate; Tank 673	40	60	708	5. Fixed	2. Column s	1	1			
006		Gasoline; Tank 674	40	60	708	4. Internal	2. Column s	1	1	7. Bolted,	7. Resilie	
007		Distillate; Tank 675	40	60	708	4. Internal	2. Column s	1	1	7. Bolted,	7. Resilie	
008		Distillate; Tank 676	40	60	708	4. Internal	2. Column s	1	1	7. Bolted,	7. Resilie	
009		Distillate; Tank 758	41	73	1217	5. Fixed	2. Column s	6	1			
010		Distillate; Tank 759	41	73	1217	5. Fixed	2. Column s	6	1			
011		Gasoline 8006619	14	10	8	5. Fixed	1. Self-sup					1989



Minnesota Pollution Control Agency

AIR QUALITY
520 LAFAYETTE ROAD NO., ST. PAUL, MN 55155-4194

PERMIT APPLICATION FORM **CAP-GI-05D**
FUGITIVE EMISSION
SOURCE INFORMATION
3/7/06

1) Facility ID No.: 083000007 2) Facility Name: Magellan Pipeline Co LP-Marshall Terminal

3a) Fugitive Source ID No.	3b) Pollutant Emitted (particulate matter (PM) or VOC)	3c) Included in Ambient Assessment?	3d) Description of Fugitive Emission Source
001	VOC	No	Valves, Pump Seals, Flanges, and Connectors-Equipment Leaks

Instructions on page 3

1a) AQ Facility ID number: **083000007**

1b) Agency Interest ID number: **1724**

2) Facility name: **Magellan Pipeline Co LP-Marshall Terminal**
☐ Check this box if using GI-05F for a Reissuance application. You will need the AQ SI details report labeled **SI-SI relationships**. See the instructions for fields that may be marked "null" in the **SI-SI relationships** report.

Note – If your most recent permit was issued after November 1, 2015 or you are applying for reissuance, use Tempo ID numbers for all equipment, stacks, controls, etc. Tempo IDs are in the form EQUIxxx, TREAxxx, STRUxxx, FUGIxxx, etc.

3a) Source ID number	3b) % Flow	3c) Relationship	3d) CE ID number	3e) Start date (mm/dd/yyyy)	3f) End date (mm/dd/yyyy)	3g) % Flow	3h) Relationship	3i) S/V ID number	3j) Start date (mm/dd/yyyy)	3k) End date (mm/dd/yyyy)	3l) Comments
EQUI 1	100	is controlled by	TREA 1	6/1/1996			sends to	001			TREA 1 is the thermal oxidizer
EQUI 2	100	is controlled by	TREA 2	12/31/1946			sends to	002			TREA 2 is the catalytic oxidizer
EQUI 4		is controlled by					sends to				EQUI 4 is uncontrolled
EQUI 5		is controlled by					sends to				EQUI 5 is uncontrolled
EQUI 6		is controlled by					sends to				EQUI 6 is uncontrolled
EQUI 7		is controlled by					sends to				EQUI 7 is uncontrolled
EQUI 8		is controlled by					sends to				EQUI 8 is uncontrolled
EQUI 9		is controlled by					sends to				EQUI 9 is uncontrolled
EQUI10		is controlled by					sends to				EQUI 10 is uncontrolled
EQUI11		is controlled by					sends to				EQUI 11 is uncontrolled
EQUI12		is controlled by					sends to				EQUI 12 is uncontrolled
EQUI13		is controlled by					sends to				EQUI 13 is uncontrolled
EQUI14		is controlled by					sends to				EQUI 14 is uncontrolled



520 Lafayette Road North
St. Paul, MN 55155-4194

CAP-GI-07

Capped Permit facility emissions summary

Air Quality Permit Program

Doc Type: Permit Application

Instructions on page 2

1a) AQ Facility ID number: 083000007

1b) Agency Interest ID number: 1724

2) Facility name: Magellan Pipeline Co LP-Marshall Terminal

[illegible]



520 Lafayette Road North
St. Paul, MN 55155-4194

CAP-GI-07

Capped Permit facility emissions summary

Air Quality Permit Program

Doc Type: Permit Application

Instructions on page 2

1a) AQ Facility ID number: 08300007 1b) Agency Interest ID number: 1724

2) Facility name: Magellan Pipeline Co LP-Marshall Terminal

3a)	3b)	3c) CAS#:	PM Con		CAS#:	PM Fil	CAS#:
Emission source type	Emission source ID number	3d) Pollutant name:	Condensible Particulate Matter		Pollutant name:	Filterable Particulate Matter	
		3e) Potential	3f) optional	Potential	Potential	Actual	Potential
		lbs per hr	tpy unrestricted	Actual tons per yr	lbs per hr	tpy unrestricted	lbs per hr
EU	002	0.05	0.24		0.44	1.92	



520 Lafayette Road North
St. Paul, MN 55155-4194

CAP-GI-07

Capped Permit facility emissions summary

Air Quality Permit Program

Doc Type: Permit Application

Instructions on page 2

1a) AQ Facility ID number: 08300007 1b) Agency Interest ID number: 1724

2) Facility name: Magellan Pipeline Co LP-Marshall Terminal

3a) Emission source type	3b) Emission source ID number	3c) CAS#:		PM10 FIL		CAS#:		PM2.5 Fil		CAS#:		SOx	
		3d) Pollutant name:		Filterable Particulate Matter < 10 um		Pollutant name:		Filterable Particulate Matter < 2.5 um		Pollutant name:		Sulfur Oxides	
		3e) Potential		3f) optional		Potential		Potential		Potential		Potential	
		lbs per hr	tpy unrestricted	Actual tons per yr		lbs per hr	tpy unrestricted	Actual tons per yr		lbs per hr	tpy unrestricted	Actual tons per yr	
EU	002	0.35	1.53			0.34	1.48			0.12	0.51		



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Capped Permit facility emissions summary

Air Quality Permit Program

Doc Type: Permit Application

Instructions on page 2

1a) AQ Facility ID number: 08300007

1b) Agency Interest ID number: 1724

2) Facility name: Magellan Pipeline Co LP-Marshall Terminal

3a)	3b)	3c) CAS#:	NOx		CAS#:	630-08-0	CAS#:	75-07-0							
Emission source type	Emission source ID number	3d) Pollutant name:		Nitrogen Oxides		3f) optional		Pollutant name:	Carbon Monoxide	Potential		Actual tons per yr	Potential		Actual tons per yr
		3e) Potential	lbs per hr	tpy	unrestricted	Actual tons per yr	lbs per hr			tpy	unrestricted		tpy	unrestricted	
EU	002		19.06		83.49						1.85	8.10		8.90 E-04	3.90 E-03
EU	001		3.20		5.61						1.28	14.03			



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Capped Permit facility emissions summary

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1a) AQ Facility ID number: 08300007 1b) Agency Interest ID number: 1724

2) Facility name: Magellan Pipeline Co LP-Marshall Terminal

3a)	3b)	3c) CAS#:	107-02-8	CAS#:	50-00-0	CAS#:
Emission source type	Emission source ID number	3d) Pollutant name:	Acrolein		Formaldehyde	
		3e) Potential	3f) optional	Potential	Potential	
		lbs per hr	tpy unrestricted	Actual tons per yr	lbs per hr	tpy unrestricted
EU	002	2.78 E-04	1.22 E-03		3.81 E-02	0.17



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Capped Permit facility emissions summary

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Instructions on page 2

1a) AQ Facility ID number: 08300007

1b) Agency Interest ID number: 1724

2) Facility name: Magellan Pipeline Co LP-Marshall Terminal

3a) Emission source type	3b) Emission source ID number	3c) CAS#:	50-00-0	CAS#:	CAS#:	Pollutant name:						Pollutant name:						CAS#:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		3d) Pollutant name:		Formaldehyde		3f) optional		Potential		Potential		Potential		Potential		Potential																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		3e) Potential	tpy unrestricted	Actual tons per yr	lbs per hr	tpy unrestricted	Actual tons per yr	lbs per hr	tpy unrestricted	Actual tons per yr	lbs per hr	tpy unrestricted	Actual tons per yr	lbs per hr	tpy unrestricted	Actual tons per yr																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
EU	002	3.81 E-02	0.17																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														



520 Lafayette Road North
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CAP-GI-07

Capped Permit facility emissions summary

Air Quality Permit Program

Doc Type: Permit Application

Instructions on page 2

1a) AQ Facility ID number: 08300007

1b) Agency Interest ID number: 1724

2) Facility name: Magellan Pipeline Co LP-Marshall Terminal

3a) Emission source type	3b) Emission source ID number	3c) CAS#:		71-43-2		CAS#:		100-41-4		CAS#:		110-54-3	
		3d) Pollutant name:		Benzene		Pollutant name:		Ethyl Benzene		Pollutant name:		Hexane	
		3e) Potential		3f) optional		Potential		Potential		Potential		Potential	
		lbs per hr	tpy	Actual tons per yr	tpy	lbs per hr	tpy	Actual tons per yr	tpy	lbs per hr	tpy	Actual tons per yr	tpy
TK	001	6.86 E-04	3.00 E-03		3.34 E-04	7.62 E-05	3.34 E-04		3.34 E-03	1.22 E-03	5.34 E-03		5.34 E-03
TK	002	7.32 E-03	3.21 E-02		3.56 E-03	8.13 E-04	3.56 E-03		0.06	1.30 E-02			0.06
TK	003	3.12 E-04	1.37 E-03		1.52 E-04	3.47 E-05	1.52 E-04		2.43 E-03	5.55 E-04	2.43 E-03		2.43 E-03
TK	004	7.88 E-03	0.03		3.84 E-03	8.76 E-04	3.84 E-03		0.06	1.40 E-02			0.06
TK	005	5.84 E-04	2.56 E-03		2.84 E-04	6.49 E-05	2.84 E-04		4.55 E-03	1.04 E-03	4.55 E-03		4.55 E-03
TK	006	7.32 E-03	3.21 E-02		3.56 E-03	8.13 E-04	3.56 E-03			1.30 E-02	5.70 E-02		
TK	007	3.11 E-04	1.36 E-03		1.51 E-04	3.46 E-05	1.51 E-04		2.42 E-03	5.53 E-04	2.42 E-03		2.42 E-03
TK	008	3.11 E-04	1.36 E-03		1.51 E-04	3.46 E-05	1.51 E-04		2.42 E-03	5.53 E-04	2.42 E-03		2.42 E-03
TK	009	8.73 E-04	3.82 E-03		4.25 E-04	9.70 E-05	4.25 E-04		6.80 E-03	1.55 E-03	6.80 E-03		6.80 E-03
TK	010	8.73 E-04	3.82 E-02		4.25 E-04	9.70 E-05	4.25 E-04		6.80 E-03	1.55 E-03	6.80 E-03		6.80 E-03
4) Total facility		Potential lbs/hr	Unrestricted potential tpy CAP-GI-07	Actual TPY required FORM	Potential lbs/hr	Potential lbs/hr	Unrestricted potential tpy	Actual TPY required	Potential lbs/hr	Potential lbs/hr	Unrestricted potential tpy	Actual TPY required	Actual TPY required
		SEE FINAL			>>>>	>>>>	>>>>	>>>>	>>>>	>>>>	>>>>	>>>>	>>>>



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Capped Permit facility emissions summary

Air Quality Permit Program

Doc Type: Permit Application

Instructions on page 2

1a) AQ Facility ID number: 08300007

1b) Agency Interest ID number: 1427

2) Facility name: Magellan Pipeline Co LP-Marshall Terminal

3a) Emission source type	3b) Emission source ID number	3c) CAS#:		108-88-3		CAS#:		540-84-1		CAS#:		1330-20-7	
		3d) Pollutant name:		Toluene		Pollutant name:		2,2,4-Trimethylpentane		Pollutant name:		Total Xylenes	
		3e) Potential		3f) optional		Potential		Potential		Potential		Potential	
		lbs per hr	tpy unrestricted	Actual tons per yr	Actual tons per yr	lbs per hr	tpy unrestricted	lbs per hr	tpy unrestricted	lbs per hr	tpy unrestricted	lbs per hr	tpy unrestricted
TK	001	9.91 E-04	4.34 E-03			6.10 E-04	2.67 E-03			3.81 E-04	1.67 E-03		
TK	002	1.06 E-02	0.05			6.50 E-03	2.85 E-02			4.07 E-03	1.78 E-02		
TK	003	4.51 E-04	1.97 E-03			2.77 E-04	1.21 E-03			1.73 E-04	7.59 E-04		
TK	004	1.14 E-02	0.05			7.01 E-03	0.03			4.38 E-03	0.02		
TK	005	8.43 E-04	3.69 E-03			5.19 E-04	2.27 E-03			3.24 E-04	1.42 E-03		
TK	006	1.06 E-02	4.63 E-02			6.50 E-03	2.85 E-02			4.07 E-03	1.78 E-02		
TK	007	4.50 E-04	1.97 E-03			2.77 E-04	1.21 E-03			1.73 E-04	7.57 E-04		
TK	008	4.50 E-04	1.97 E-03			2.77 E-04	1.21 E-03			1.73 E-04	7.57 E-04		
TK	009	1.26 E-03	5.52 E-03			7.76 E-04	3.40 E-03			4.85 E-04	2.12 E-03		
TK	010	1.26 E-03	5.52 E-03			7.76 E-04	3.40 E-03			4.85 E-04	2.12 E-03		
4) Total facility		Potential lbs/hr SEE FINAL	Unrestricted potential tpy CAP-GI-07	Actual TPY required FORM	Actual TPY required	Potential lbs/hr >>>>	Unrestricted potential tpy >>>>	Potential lbs/hr >>>>	Unrestricted potential tpy >>>>	Potential lbs/hr >>>>	Unrestricted potential tpy >>>>	Actual TPY required	Actual TPY required



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Capped Permit facility emissions summary

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Air Quality Permit Program

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1a) AQ Facility ID number: 083000007

1b) Agency Interest ID number: 1724

2) Facility name: Magellan Pipeline Co LP-Marshall Terminal

[illegible]



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CAP-GI-07

Capped Permit facility emissions summary

Air Quality Permit Program

Doc Type: Permit Application

Instructions on page 2

1a) AQ Facility ID number: 083000007

1b) Agency Interest ID number: 1724

2) Facility name: Magellan Pipeline Co LP-Marshall Terminal

3a)	3b)	3c) CAS#:	108-88-3	CAS#:	540-84-1	CAS#:	1330-20-7
Emission source type	Emission source ID number	3d) Pollutant name: Toluene		Pollutant name: 2,2,4-Trimethylpentane		Pollutant name: Total Xylenes	
		3e) Potential	3f) optional	Potential	Actual	Potential	Actual
		lbs per hr	tpy unrestricted	Actual tons per yr	lbs per hr	tpy unrestricted	Actual tons per yr
TK	011	2.21 E-03	9.68 E-03		1.36 E-03	5.95 E-03	
EU	001	0.19	0.85		0.12	0.52	
EU	Landings	9.80 E-03	0.04		6.03 E-03	0.03	
EU	Cleanings	4.24 E-02	0.19		2.61 E-02	0.11	
FS	001	6.77 E-04	2.97 E-03		4.17 E-04	1.83 E-03	
EU	002	3.69 E-02	0.16				



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Capped Permit facility emissions summary

Air Quality Permit Program

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Instructions on page 2

1a) AQ Facility ID number: 08300007

1b) Agency Interest ID number: 1724

2) Facility name: Magellan Pipeline Co LP-Marshall Terminal

3a) Emission source type	3b) Emission source ID number	3c) CAS#:		VOC		CAS#:		CAS#:		
		3d) Pollutant name:		Volatile Organic Compounds		Pollutant name:		Pollutant name:		
		3e) Potential		3f) optional		Potential		Potential		
		lbs per hr	tpy unrestricted	Actual tons per yr	lbs per hr	tpy unrestricted	Actual tons per yr	lbs per hr	tpy unrestricted	Actual tons per yr
TK	001	0.08	0.33							
TK	002	0.81	3.56							
TK	003	0.03	0.15							
TK	004	0.88	3.84							
TK	005	0.06	0.28							
TK	006	0.81	3.56							
TK	007	0.03	0.15							
TK	008	0.03	0.15							
TK	009	0.10	0.42							
TK	010	0.10	0.42							
4) Total facility		Potential lbs/hr SEE FINAL	Unrestricted potential tpy CAP-GI-07	Actual TPY required FORM	Potential lbs/hr >>>	Unrestricted potential tpy >>>	Actual TPY required >>>	Potential lbs/hr >>>	Unrestricted potential tpy >>>	Actual TPY required >>>



CAP-GI-07

Capped Permit facility emissions summary

520 Lafayette Road North
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Air Quality Permit Program

Doc Type: Permit Application

Instructions on page 2

1a) AQ Facility ID number: 083000007

1b) Agency Interest ID number: 1724

2) Facility name: Magellan Pipeline Co LP-Marshall Terminal

3a)	3b)	3c) CAS#:	VOC	CAS#:	CAS#:
Emission source type	Emission source ID number	3d) Pollutant name:	Volatile Organic Compounds	Pollutant name:	Pollutant name:
		3e) Potential	3f) optional	Potential	Potential
		lbs per hr	tpy unrestricted	Actual tons per yr	tpy unrestricted
TK	001	0.08	0.33		
TK	002	0.81	3.56		
TK	003	0.03	0.15		
TK	004	0.88	3.84		
TK	005	0.06	0.28		
TK	006	0.81	3.56		
TK	007	0.03	0.15		
TK	008	0.03	0.15		
TK	009	0.10	0.42		
TK	010	0.10	0.42		
4)	Potential lbs/hr	Actual TPY required	Potential lbs/hr	Actual TPY required	Potential lbs/hr
Total facility	SEE FINAL	Unrestricted potential tpy CAP-GI-07	FORM	Unrestricted potential tpy >>>>	Unrestricted potential tpy >>>>
					Actual TPY required >>>>



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Capped Permit facility emissions summary

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1a) AQ Facility ID number: 08300007 1b) Agency Interest ID number: 1724

2) Facility name: Magellan Pipeline Co LP-Marshall Terminal

3a) Emission source type	3b) Emission source ID number	3c) CAS#:	VOC		CAS#:		CAS#:					
		3d) Pollutant name:	3e) Potential		3f) optional/ Actual		Pollutant name:					
			lbs per hr	tpy unrestricted	Actual tons per yr	lbs per hr	tpy unrestricted	Actual tons per yr	lbs per hr	tpy unrestricted	Actual tons per yr	
TK	011		0.17	0.74								
EU	001		15.03	65.81								
EU	Landings		13.10	3.30								
EU	Cleanings		148.95	14.30								
FS	001		0.05	0.23								
	</											



**Minnesota Pollution
Control Agency**

520 Lafayette Road North
St. Paul, MN 55155-4194

CAP-GI-09

Capped Permit Requirements Form

Air Quality Permit Program

Doc Type: Permit Application

Note: You must submit this form as part of your capped permit application package.

AQ Facility ID No.: 08300007

AQ File No.: 1724

Facility Name: Magellan Pipeline Co LP-Marshall Terminal

Federal and State Requirements

This packet of forms, **CAP-GI-09 Requirements**, will help you to determine the federal and state requirements with which your facility must comply. Be advised that you must include any applicable requirement that may not be addressed in this part of the application.

The first section of this form asks questions to find out if your facility is subject to specific federal and state regulations. To assist you in filling out this form, there are five attachments, forms **CAP-GI-09 A, D, F, G and I**. This form will direct you to each of the attachments as necessary, which will help you determine if your facility is subject to these regulations. When you are directed to an attachment, complete it as required, but *always* return to this **CAP-GI-09 Requirements** form.

In this form and the others in the CAP-GI-09 series, attach additional pages if the space provided is not sufficient.

1) **National Emission Standards for Hazardous Air Pollutants for Source Categories** (NESHAP for Source Categories, 40 CFR pt. 63)

1a) To determine if any requirements for the National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Source Categories (40 CFR pt. 63) apply to your facility, you must complete attached form **CAP-GI-09A Requirements: NESHAP for Source Categories** (40 CFR pt. 63).

1b) After completing form CAP-GI-09A, check one of the following boxes:

- ☒ **Yes, my facility is currently** subject to an area source NESHAP for Source Categories requirements. Go to question 1c.
- ☐ **No, my facility is not currently** subject to NESHAP for Source Categories requirements. Go to question 2.

1c) Check the box that best describes your source's compliance status with regards to applicable area source NESHAP requirements on the date of application and then go to question 2:

- ☒ Compliance
- ☐ Non-compliance. Describe: _____

2) **Standards of Performance for New Stationary Sources** (NSPS, New Source Performance Standards, 40 CFR pt. 60)

2a) Have you constructed, modified (as defined in 40 CFR § 60.14), or reconstructed (as defined in 40 CFR § 60.15) your emission facility, or any portion thereof, after August 17, 1971?

- ☐ **No.** Go to question 3.
- ☒ **Yes,** you may be subject to this regulation. Complete the attached form **CAP-GI-09D REQUIREMENTS: NSPS**.

2b) After completing the above question (and the attachment if necessary) check one of the following boxes:

- ☒ **Yes,** my facility (or a portion of it) **is** subject to NSPS requirements. My facility is only subject to one or more of the 14 NSPS requirement listed in Minn. R. 7007.1140, subp. 2 (E). Go to question 2c.
- ☐ **No,** my facility **is not** subject to NSPS requirements. Go to question 3.

2c) Check the box that best describes your source's compliance status with regards to applicable NSPS requirements on the date of application and then go to question 3:

- ☒ Compliance
- ☐ Non-compliance. Describe: _____

3) Stratospheric Ozone Protection

(1990 Clean Air Act, as amended, Sections 601-618)

3a) To determine if this federal regulation applies to your facility, you must complete the attached form **CAP-GI-09F Requirements: Stratospheric Ozone**.

3b) After completing form **CAP-GI-09F Requirements: Stratospheric Ozone**, check one of the following boxes:

- ☐ **Yes**, my facility **is** subject to this requirement. Go to question 3c.
☒ **No**, my facility **is not** subject to this requirement. Go to question 4.

3c) Check the box that best describes your source's compliance status with regards to applicable stratospheric ozone requirements on the date of application and then go to question 4:

- ☐ Compliance
☐ Non-compliance. Describe: _____

4) Risk Management Programs for Chemical Accidental Release Prevention

(40 CFR pt. 68, Section 112(r) of the Clean Air Act Amendments)

4a) Section 112(r) of the Clean Air Act requires facilities that produce, process, store or use any of the substances listed in form **GI-09G: Risk Management Programs for Chemical Accidental Release Prevention** (40 CFR pt. 68), in amounts greater than the listed thresholds, to develop and implement a risk management plan for accidental releases.

4b) Determine if you produce, process, store or use any of the substances listed in form **CAP-GI-09G: Risk Management Programs for Chemical Accidental Release Prevention**, and check one of the following boxes:

- ☐ **Yes**, my facility **does** produce, process, store or use one or more of the substances listed in form **CAP-GI-09G**, in amounts exceeding the listed thresholds. Go to question 4c.
☒ **No**, my facility **does not** produce, process, store or use any of the substances listed in form **CAP-GI-09G**, in amounts exceeding the listed thresholds. Go to question 5.

4c) Check the box that best describes your source's compliance status with regards to applicable 112(r) requirements on the date of application and then go to question 5:

- ☐ Compliance
☐ Non-compliance. Describe: _____

5) Federal Ozone Measures for the Control of Emissions from Certain Sources

(1990 Clean Air Act, as amended, Section 183(e))

5a) Rules have been promulgated under the above section of the Clean Air Act regulating Volatile Organic Compounds (VOCs) from consumer or commercial products that emit VOCs. Does your facility manufacture: (check all that apply)

- ☐ Household consumer products containing VOCs.
☐ Architectural coatings containing VOCs.
☐ Autobody refinishing coatings containing VOCs.
☒ My facility does not manufacture any of the above. Go to question 6.

5b) If you checked any boxes in question 5a) review the regulations at <http://www.epa.gov/ttn/atw/183e/gen/183epg.html> to determine whether your facility may be subject to any rules that are adopted under § 183(e) requiring emission reductions. After reviewing the regulations, check one of the following boxes.

- ☐ Yes, my facility is subject to consumer and commercial products regulation under section 183(e). Go to question 5c.
☐ No, my facility is not subject to consumer and commercial products regulation under section 183(e). Go to question 6.

5c) Check the box that best describes your source's compliance status with regards to applicable 183(e) requirements on the date of application and then go to question 6:

- ☐ Compliance
☐ Non-compliance. Describe: _____

6) Minnesota State Air Quality Rules

6a) To determine which Minnesota State rules you may be subject to, go to form **CAP-GI-09I Requirements: State Rules**.

- 6b) Whether permitted or not, **every business** and activity in Minnesota is **subject to the rules listed in the following table**. Check the box that best describes your source's compliance status with regards to the rules in the following table and other applicable state rules identified in form CAP-GI-09I on the date of application and then go to question 7:

- ☒ Compliance
☐ Non-compliance. Describe: _____

Title of the Rule	Minnesota Rules (Chapter or Part)	What the Content of the Rule is:
Air Quality Emission Fees	Part 7002.0025 - 7002.0095	Requires facilities to pay emission fees every year within 60 days of MPCA billing.
Air Emission Permits	Parts 7007.0050 - 7007.1850	Outlines when an air emission permit is required and procedures for obtaining one.
Minnesota and National Ambient Air Quality Standards	Part 7009.0010 - 7009.0080	No one is allowed to emit any of the limited pollutants in such a manner that ambient levels of the pollutant are higher than the maximum level.
Applicability of Standards of Performance	Parts 7011.0010, and 7011.0050	Indicates that facilities must comply with all applicable state air pollution rules.
Circumvention	Part 7011.0020	States that no one may conceal or dilute emissions which would otherwise violate a federal or state air pollution control rule.
Emission Standards for Visible Air Contaminants	Part 7011.0100 - 7011.0120	Outlines restrictions against emitting opaque smoke from facilities.
Preventing Particulate Matter from Becoming Airborne	Part 7011.0150	States that no person shall cause particulate matter to become airborne if it can be avoided with listed preventative measures.
Continuous Monitors	Part 7017.1000	Outlines requirements for continuous monitoring systems.
Performance Tests	Part 7017.2001 - 7017.2060	Outlines procedures and methods for emissions and performance testing if required.
Notifications	Part 7019.1000	Requires facilities to notify the MPCA of shutdowns and breakdowns.
Reports	Part 7019.2000	Requires specific records and reports from facilities with continuous monitoring systems.
Emission Inventory	Part 7019.3000 - 7019.3100	Requires facilities to submit an Emission Inventory Report by April 1 every year.
Motor Vehicles	Part 7023.0100 - 7023.0120	Outlines restrictions against emitting opaque smoke from motor vehicles, trains, boats, construction equipment and stationary internal combustion engines.
Noise Pollution Control	Part 7030.0010 - 7030.0080	Sets noise standards which cannot be exceeded.

7) **You have completed this form.**

**Capped Permit Requirements:
NESHAP for Source Categories (40 CFR pt. 63)**

Air Quality Permit Program

Doc Type: Permit Application

National Emission Standards for Hazardous Air Pollutants for source categories (NESHAP for Source Categories, 40 CFR pt. 63)

Tables A (Hazardous Air Pollutants) and B (Source Categories) are provided for your reference and to assist with completing CAP-00. They are not used to answer Question 1 on this form.

AQ Facility ID number: 08300007

Agency Interest ID number: 1724

Facility name: Magellan Pipeline Co LP-Marshall Terminal

- 1) If your source has any equipment that belongs to the following area source categories, place a check in the box next to that category and read the specified NESHAP for Source Categories to determine all applicable requirements for area sources. The rules for these source categories may apply whether or not your facility is considered a major source for hazardous air pollutants. If you check one or more boxes below, you must answer "Yes" to question 1b when you return to Form CAP-GI-09. If any part of your facility is subject to a listed standard that requires a Part 70 operating permit, you may not get a Capped Permit but must instead apply for and obtain a Part 70 permit.

- ☐ Acrylic and Modacrylic Fibers Production, 40 CFR § 63 Subpart LLLLLL
- ☐ Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR § 63 Subpart AAAAAA
- ☐ Carbon Black Production, 40 CFR § 63 Subpart MMMMMM (see note 1)
- ☐ Chemical Manufacturing Area Sources, 40 CFR § 63 Subpart VVVVVV (see note 2)
- ☐ Chemical Manufacturing: Chromium Compounds, 40 CFR § 63 Subpart NNNNNN (see note 1)
- ☐ Chemical Preparations Industry, 40 CFR § 63 Subpart BBBBBS
- ☐ Chromic acid anodizing (**Chromium Electroplating**), 40 CFR § 63 Subpart N
- ☐ Clay Ceramics Manufacturing, 40 CFR § 63 Subpart RRRRRR
- ☐ Commercial dry cleaning (Perc) transfer machines, 40 CFR § 63 Subpart M
- ☐ Commercial sterilization facilities, 40 CFR § 63 Subpart O
- ☐ Decorative chromium electroplating (**Chromium Electroplating**), 40 CFR § 63 Subpart N
- ☐ Electric Arc Furnace Steelmaking Facilities, 40 CFR § 63 Subpart YYYYYY (see note 1)
- ☐ Ferroalloys Production Facilities, 40 CFR § 63 Subpart YYYYYY
- ☐ Flexible Polyurethane Foam Production and Fabrication, 40 CFR § 63 Subpart OOOOOO
- ☐ Gasoline Dispensing Facilities, 40 CFR § 63 Subpart CCCCCC
- ☒ Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities, 40 CFR § 63 Subpart BBBBBS
- ☐ Glass Manufacturing, 40 CFR § 63 Subpart SSSSSS (see note 1)
- ☐ Gold Mine Ore Processing and Production, 40 CFR § 63 Subpart EEEEEEE
- ☐ Halogenated solvent cleaners (Degreasing Organic Cleaners), 40 CFR § 63 Subpart T
- ☐ Hard chromium electroplating (**Chromium Electroplating**), 40 CFR § 63 Subpart N
- ☐ Hospital Sterilizers Using Ethylene Oxide, 40 CFR § 63 Subpart WWWW
- ☐ Industrial, Commercial, and Institutional Boilers, 40 CFR § 63 Subpart JJJJJJ
- ☐ Iron and Steel Foundries Area Sources, 40 CFR § 63 Subpart ZZZZZ
- ☐ Lead Acid Battery Manufacturing, 40 CFR § 63 Subpart PPPPPP
- ☐ Metal Fabrication and Finishing Sources, 40 CFR § 63 Subpart XXXXXX
- ☐ Nonferrous Foundries: Aluminum, Copper, and Other, 40 CFR § 63 Subpart ZZZZZ
- ☐ Oil and natural gas production, 40 CFR § 63 Subpart HH
- ☐ Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR § 63 Subpart HHHHHH
- ☐ Paints and Allied Products Manufacturing, 40 CFR § 63 Subpart CCCCCC
- ☐ Plating and Polishing Operations, 40 CFR § 63 Subpart WWWW
- ☐ Polyvinyl Chloride and Copolymers Production, 40 CFR § 63 Subpart DDDDDD
- ☐ Prepared Feeds Manufacturing, 40 CFR § 63 Subpart DDDDDDD
- ☐ Primary Copper Smelting, 40 CFR § 63 Subpart EEEEEEE (see note 1)
- ☐ Primary Nonferrous Metals: Zinc, Cadmium, and Beryllium, 40 CFR § 63 Subpart GGGGGG (see note 1)

- ☒ Reciprocating Internal Combustion Engines, 40 CFR § 63 Subpart ZZZZ
- ☐ Secondary aluminum processing, 40 CFR § 63 Subpart RRR
- ☐ Secondary Copper Smelting, 40 CFR § 63 Subpart FFFFFF (see note 1)
- ☐ Secondary Nonferrous Metals Processing (Brass, Bronze, Magnesium, Zinc), 40 CFR § 63 Subpart TTTTTT
- ☐ Wood Preserving, 40 CFR § 63 Subpart QQQQQQ

Notes

1. If any part of your facility is subject Subpart(s) MMMMMM, NNNNNN, YYYYYY, SSSSSS, EEEEE, EEEEE, GGGGGG, and/or FFFFFF, you must apply for and obtain a Part 70 operating permit; a facility subject to any of these subparts does not qualify for a Capped Permit.
2. If a source subject to this subpart was a major source of HAP and installed control equipment after November 15, 1990, to become an area source of HAP, the source must obtain a Part 70 operating permit, regardless of the facility emissions.

2) Return to Form CAP-GI-09 and answer question 1b.

Table A - Hazardous Air Pollutants

75070	Acetaldehyde	119937	3,3-Dimethyl benzidine
60355	Acetamide	79447	Dimethyl carbamoyl chloride
75058	Acetonitrile	68122	Dimethyl formamide
98862	Acetophenone	57147	1,1 Dimethyl hydrazine
53963	2-Acetylaminofluorene	131113	Dimethyl phthalate
107028	Acrolein	77781	Dimethyl Sulfate
79061	Acrylamide	534521	4,6-Dinitro-o-cresol, and salts
79107	Acrylic acid	51285	2,4-Dinitrophenol
107131	Acrylonitrile	121142	2,4-Dinitrotoluene
107051	Allyl chloride	123911	1,4-Dioxane (1,4-Diethyleneoxide)
92671	4-Aminobiphenyl	122667	1,2-Diphenylhydrazine
62533	Aniline		
90040	o-Anisidine	106898	Epichlorohydrin (1-Chloro-2,3-epoxypropane)
1332214	Asbestos	106887	1,2-Epoxybutane
		140885	Ethyl acrylate
71432	Benzene	100414	Ethyl benzene
92875	Benzidine	51796	Ethyl carbamate (Urethane)
98077	Benzotrichloride	75003	Ethyl chloride (Chloroethane)
100447	Benzyl chloride	106934	Ethylene dibromide (Dibromoethane)
92524	Biphenyl	107062	Ethylene dichloride (1,2-Dichloroethane)
117817	Bis (2-ethylhexyl) phthalate (DEHP)	107211	Ethylene glycol
542881	Bis (chloromethyl) ether	151564	Ethylene imine (Aziridine)
75252	Bromoform	75218	Ethylene oxide
106945	1-Bromopropane (n-propyl bromide)	96457	Ethylene thiourea
106990	1,3-Butadiene	75343	Ethylidene dichloride (1,1-Dichloroethane)
158627	Calcium cyanamide	50000	Formaldehyde
133062	Captan		
63252	Carbaryl	76448	Heptachlor
75150	Carbon disulfide	118741	Hexachlorobenzene
56235	Carbon tetrachloride	87683	Hexachlorobutadiene
463581	Carbonyl sulfide	77474	Hexachlorocyclopentadiene
120809	Catechol	67721	Hexachloroethane
133904	Chloramben	822060	Hexamethylene-1,6-diisocyanate
57749	Chlordane	680319	Hexamethylphosphoramide
7782505	Chlorine	110543	Hexane
79118	Chloroacetic acid	302012	Hydrazine
532274	2-Chloroacetophenone	7647010	Hydrochloric acid
108907	Chlorobenzene	7664393	Hydrogen fluoride (hydrofluoric acid)
510156	Chlorobenzilate	123319	Hydroquinone
67663	Chloroform		
107302	Chloromethyl methyl ether	78591	Isophorone
126998	Chloroprene		
1319773	Cresols/Cresylic acid (isomers and mixture)	58899	Lindane (all isomers)
95487	o-Cresol		
108394	m-Cresol	108316	Maleic anhydride
106445	p-Cresol	67561	Methanol
98828	Cumene	72435	Methoxychlor
		74839	Methyl bromide (Bromomethane)
94757	2,4-D, salts and esters	74873	Methyl chloride (Chloromethane)
3547044	DDE	71556	Methyl chloroform (1,1,1-Trichloroethane)
334883	Diazomethane	60344	Methyl hydrazine
132649	Dibenzofurans	74884	Methyl iodide (Iodomethane)
96128	1,2-Dibromo-3-chloropropane	108101	Methyl isobutyl ketone (Hexone)
84742	Dibutylphthalate	624839	Methyl isocyanate
106467	1,4-Dichlorobenzene(p)	80626	Methyl methacrylate
91941	3,3'-Dichlorobenzidine	1634044	Methyl tert butyl ether
111444	Dichloroethyl ether (Bis(2-chloroethyl)ether)	101144	4,4-Methylene bis (2-chloroaniline)
542756	1,3-Dichloropropene	75092	Methylene chloride (Dichloromethane)
62737	Dichlorvos	101688	Methylene diphenyl diisocyanate (MDI)
111422	Diethanolamine	101779	4,4'-methylenedianiline
121697	N,N-Diethyl aniline (N,N-Dimethylaniline)		
64675	Diethyl sulfate		
119904	3,3-Dimethoxybenzidine		
60117	Dimethyl aminoazobenzene		

Table A - Hazardous Air Pollutants

91203	Naphthalene
98953	Nitrobenzene
92933	4-Nitrobiphenyl
100027	4-Nitrophenol
79469	2-Nitropropane
684935	N-Nitroso-N-methylurea
62759	N-Nitrosodimethylamine
59892	N-Nitosomorpholine
56382	Parathion
82688	Pentachloronitrobenzene (Quintobenzene)
87865	Pentachlorophenol
108952	Phenol
106503	p-Phenylenediamine
75445	Phosgene
7803512	Phosphine
7723140	Phosphorus
85449	Phthalic anhydride
1336363	Polychlorinated biphenyls (aroclor)
1120714	1,3-Propane sultone
57578	beta-Propiolactone
123386	Propionaldehyde
114261	Propoxur (Baygon)
78875	Propylene dichloride (1,2-Dichloropropane)
75569	Propylene oxide
75558	1,2-Propylenimine (2-Methyl aziridine)
91225	Quinoline
106514	Quinone
100425	Styrene
96093	Styrene Oxide
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin
79345	1,1,2,2-Tetrachloroethane
127184	Tetrachloroethylene (Perchloroethylene)
7550450	Titanium tetrachloride
108883	Toluene
95807	2,4-Toluene diamine
584849	2,4-Toluene diisocyanate
95534	o-Toluidine
8001352	Toxaphene (chlorinated camphene)
120821	1,2,4-Trichlorobenzene
79005	1,1,2-Trichloroethane
79016	Trichloroethylene (TCE) ⁵
95954	2,4,5-Trichlorophenol
88062	2,4,6-Trichlorophenol
121448	Triethylamine
1582098	Trifluralin
540841	2,2,4-Trimethylpentane
108054	Vinyl acetate
593602	Vinyl bromide
75014	Vinyl chloride
75354	Vinylidene chloride (1,1-Dichloroethylene)
1330207	Xylenes (isomers and mixtures)
95476	o-Xylenes
108383	m-Xylenes
106423	p-Xylenes

0	Antimony compounds
0	Arsenic compounds (inorganic including arsine)
0	Beryllium compounds
0	Cadmium compounds
0	Chromium compounds
0	Cobalt compounds
0	Coke oven emissions
0	Cyanide compounds
0	Glycol ethers ¹
0	Lead compounds
0	Manganese compounds
0	Mercury compounds
0	Mineral fibers ²
0	Nickel compounds
0	Polycyclic organic matter ³
0	Radionuclides ⁴
0	Selenium compounds

Note: For all listings above which contain the word "compounds" and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical's infrastructure.

¹ Glycol ethers include mono- and di- ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH₂CH₂)_n-OR' where

n = 1, 2, or 3

R = alkyl C7 or less; or

R = phenyl or alkyl substituted phenyl;

R' = H or alkyl C7 or less; or

OR' consisting of carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate.

Glycol ethers do not include ethylene glycol monobutyl ether (EGBE, 2-Butoxyethanol, CAS Number 111-76-2).

² Includes mineral fiber emissions from facilities manufacturing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter 1 micron or less.

³ Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100°C.

⁴ A type of atom which spontaneously undergoes radioactive decay.

⁵ Trichloroethylene (TCE) use on or after June 1, 2022, is banned in Minnesota, under Minnesota Statutes, section 116.385.

Table B – Source Categories

Categories of Major Sources	Subpart	Rule Promulgation Date	Compliance Date for Existing Sources (if applicable)
Acetyl resins production (Generic MACT)	YY	6/29/99	6/29/02
Acrylic fibers/modacrylic fibers production (Generic MACT)	YY	6/29/99	6/29/02
Acrylonitrile-butadiene-styrene production (Polymers and Resins IV)	JJJ	9/12/96	7/31/97
Aerospace Industry	GG	9/1/95	9/1/98
Alkyd resins production (Misc. Organic Chemical Production and Processes (MON))	FFFF	11/10/03	11/10/06
Amino resins production(Polymers and Resins III)	OOO	1/20/00	1/20/03
Ammonium sulfate production (MON)	FFFF	11/10/03	11/10/06
Asphalt/coal tar application - metal pipes	MMMM	1/2/04	1/2/07
Asphalt Roofing and Processing	LLLLL	4/29/03	5/1/06
Auto and Light Duty Truck Surface Coating	IIII	4/26/04	4/26/07
Benzyltrimethylammonium chloride production (MON)	FFFF	11/10/03	11/10/06
Boat manufacturing	VVVV	8/22/01	8/22/04
Brick and Structural Clay Products Manufacturing	JJJJJ	5/16/03	5/16/06
Butadiene-furfural cotrimer (R-11) production (Pesticide Active Ingredient Production)	MMM	6/23/99	12/23/03
Butyl rubber production (Polymers and Resins I)	U	9/5/96	3/5/97
Captafol production (Pesticide Active Ingredient Production)	MMM	6/23/99	12/23/03
Captan production (Pesticide Active Ingredient Production)	MMM	6/23/99	12/23/03
Carbon Black Production (Generic MACT)	YY	7/12/02	7/12/05
Carboxymethylcellulose production (Cellulose Production Manufacturing)	UUUU	6/11/02	6/11/05
Carbonyl sulfide production (MON)	FFFF	11/10/03	11/10/06
Cellophane production (Cellulose Production Manufacturing)	UUUU	6/11/02	6/11/05
Cellulose ethers production (Cellulose Production Manufacturing)	UUUU	6/11/02	6/11/05
Cellulose food casing manufacturing (Cellulose Production Manufacturing)	UUUU	6/11/02	6/11/05
Clay Ceramics Manufacturing	KKKKK	5/16/03	5/16/06
Chelating agents production (MON)	FFFF	11/10/03	11/10/06
Chlorinated paraffins production (MON)	FFFF	11/10/03	11/10/06
4-chloro-2-methyl acid production (Pesticide Active Ingredient Production)	MMM	6/23/99	12/23/03
Chloroneb production (Pesticide Active Ingredient Production)	MMM	6/23/99	12/23/03
Chlorothalonil production (Pesticide Active Ingredient Production)	MMM	6/23/99	12/23/03
Chromic acid anodizing (Chromium Electroplating)	N	1/25/95	1/25/97
Coke Ovens: Charging, Top Side, and Door Leaks	L	10/27/93	varies
Coke Ovens: Pushing, Quenching and Battery Stacks	CCCCC	4/14/03	4/14/06
Combustion (Gas) Turbines	YYYY	3/5/04	3/5/07
Commercial dry cleaning (Perc) transfer machines	M	9/22/93	9/23/96
Commercial sterilization facilities	O	12/6/94	12/6/98
Cyanide Chemicals Manufacturing (Generic MACT)	YY	7/12/02	7/12/05
Dacthal TM production (Pesticide Active Ingredient Production)	MMM	6/23/99	12/23/03
Decorative chromium electroplating (Chromium Electroplating)	N	1/25/95	1/25/96
4,6,-dinitro-o-cresol production (Pesticide Active Ingredient Production)	MMM	6/23/99	12/23/03

Table B (continued)

Categories of Major Sources	Subpart	Rule Promulgation Date	Compliance Date for Existing Sources (if applicable)
Engine Test Cells/Stands	PPPPP	5/27/03	5/27/03
Epichlorohydrin elastomers production (Polymers and Resins I)	U	9/5/96	3/5/97
Epoxy resins production (Polymers and Resins II)	W	3/8/95	3/3/98
Ethylene-propylene rubber production (Polymers and Resins I)	U	9/5/96	3/5/97
Ethylidene norbornene production (MON)	FFFF	11/10/03	11/10/06
Explosives production (MON)	FFFF	11/10/03	11/10/06
Ethylene Processes (Generic MACT)	YY	7/12/02	7/12/05
Fabric Printing, Coating, & Dyeing	OOOO	5/29/03	5/29/06
Ferroalloys Production	XXX	5/20/99	5/20/01
Fiberglass Mat Production (wet formed)	HHHH	4/11/02	4/11/05
Flexible Polyurethane Foam Fabrication Operations	MMMMM	4/14/03	4/14/04
Flexible Polyurethane Foam Production	III	10/7/98	10/8/01
Friction Products Manufacturing	QQQQQ	10/18/02	10/18/05
Fume Silica Production (Hydrochloric Acid Production)	NNNNN	4/17/03	4/17/06
Gasoline distribution (Stage 1)	R	12/14/94	12/15/97
Halogenated solvent cleaners (Degreasing Organic Cleaners)	T	12/2/94	12/2/97
Hard chromium electroplating (Chromium Electroplating)	N	1/25/95	1/25/97
Hazardous Waste Combustion		9/30/99	9/30/03
Hazardous Organic NESHAP (Synthetic Organic Chemical Manufacturing Industry)	F,G	4/22/94	5/14/01
	H	4/22/94	5/12/99
	I	4/22/94	5/12/98
Hydrazine production (MON)	FFFF	11/10/03	11/10/06
Hydrochloric acid production	NNNNN	4/17/03	4/17/06
Hydrogen Fluoride Production (Generic MACT)	YY	6/29/99	6/29/02
Hypalon™ production (Polymers and Resins I)	U	9/5/96	3/5/97
Industrial, Commercial and Institutional Boilers and Process Heaters	DDDDD	5/20/11	3/21/14
Industrial Dry Cleaning (Dry Cleaning)	M	9/22/93	12/20/93
Industrial Cooling Towers	Q	9/8/94	3/8/95
Integrated Iron and Steel Manufacturing	FFFFF	5/20/03	5/20/06
Iron & Steel Foundries	EEEE	4/22/04	4/22/07
Large Appliance Surface Coating	NNNN	7/23/02	7/23/05
Leather Finishing Operation	TTTT	2/27/02	2/27/05
Lime Manufacturing	AAAAA	1/5/04	1/5/07
Magnetic Tape Surface Coating	EE	12/15/94	12/15/96
Maleic anhydride copolymers production (MON)	FFFF	11/10/03	11/10/06
Manufacture of paints, coating and adhesives (MON)	FFFF	11/10/03	11/10/06
Marine Vessel Loading Operations	Y	9/19/95	9/19/99
Mercury cell Chlor-Alkali plants	IIIII	12/19/03	12/19/06
Metal Can Surface Coating	KKKK	11/13/03	11/13/05
Metal Coil Surface Coating	SSSS	6/10/02	6/10/05
Metal Furniture Surface Coating	RRRR	5/23/03	5/23/06
Methylcellulose production (Cellulose Production Manufacturing)	UUUU	6/11/02	6/11/05
Methyl methacrylate-acrylonitrile-butadiene-styrene production (Polymers and Resins IV)	JJJ	9/12/96	7/31/97

Table B (continued)

Categories of Major Sources	Subpart	Rule Promulgation Date	Compliance Date for Existing Sources (if applicable)
Methyl methacrylate-butadiene-styrene terpolymers production (Polymers and Resins IV)	JJJ	9/12/96	7/31/97
Mineral Wool Production	DDD	6/1/99	6/1/02
Miscellaneous Coating Manufacturing	HHHHH	12/11/03	12/11/06
Miscellaneous Metal Parts and Products Surface Coating	MMMM	1/2/04	1/2/07
Municipal Solid Waste Landfills	AAAA	1/16/03	1/16/04
Natural gas transmission and storage	HHH	6/17/99	6/17/02
Neoprene production (Polymers and Resins I)	U	9/5/96	3/5/97
Nitrile butadiene rubber prod. (Polymers and Resins I)	U	9/5/96	3/5/97
Non-nylon polyamides production (Polymers and Resins I)	W	3/8/95	3/3/98
Nutritional Yeast Manufacture	CCCC	5/21/01	5/21/04
Off-site Waste Recovery Operations	DD	7/1/96	2/1/00
Oil and natural gas production	HH	6/17/99	6/17/02
Organic liquids distribution (non-gasoline)	EEEE	2/3/04	2/3/07
Oxybisphenoxarsine (OBPA)/1,3-diisocyanate production (MON)	FFFF	11/10/03	11/10/06
Paper and other webs surface coating	JJJJ	12/4/02	12/4/05
Petroleum refineries - catalytic cracking (fluid and other) units, catalytic reforming units, and sulfur plant units	UUU	4/11/02	4/11/05
Petroleum refineries - Other sources not distinctly listed	CC	8/18/95	8/18/98
Pharmaceuticals production	GGG	9/21/98	9/21/01
Phenolic resins production (Polymers and Resins III)	OOO	1/20/00	1/20/03
Phosphate fertilizers production	BB	6/10/99	6/10/02
Phosphoric acid manufacturing	AA	6/10/99	6/10/02
Photographic chemicals production (MON)	FFFF	11/10/03	11/10/06
Phthalate plasticizers production (MON)	FFFF	11/10/03	11/10/06
Plastic parts and products surface coating	PPPP	4/19/04	4/19/07
Plywood & composite wood products	DDDD	7/30/04	9/28/07
Polyether polyols production	PPP	6/1/99	6/1/02
Polybutadiene rubber production (Polymers and Resins I)	U	9/5/96	3/5/97
Polycarbonates production (Generic MACT)	YY	6/29/99	6/29/02
Polyester resins production (MON)	FFFF	11/10/03	11/10/06
Polyethylene terephthalate production (Polymers and Resins IV)	JJJ	9/12/96	7/31/97
Polymerized vinylidene chloride production (MON)	FFFF	11/10/03	11/10/06
Polymethyl methacrylate resins production (MON)	FFFF	11/10/03	11/10/06
Polystyrene production (Polymers and Resins IV)	JJJ	9/12/96	7/31/97
Polysulfide rubber production (Polymers and Resins I)	U	9/5/96	3/5/97
Polyvinyl acetate emulsions production (MON)	FFFF	11/10/03	11/10/06
Polyvinyl alcohol production (MON)	FFFF	11/10/03	11/10/06
Polyvinyl butyral production (MON)	FFFF	11/10/03	11/10/06
Polyvinyl chloride and copolymers production	J	7/10/02	7/10/05
Portland cement manufacturing	LLL	6/14/99	6/10/02
Primary aluminum production	LL	10/7/97	10/7/99
Primary copper smelting	QQQ	6/12/02	6/12/05
Primary lead smelting	TTT	6/4/99	5/4/01
Primary magnesium refining	TTTTT	10/10/03	10/11/04
Printing/publishing	KK	5/30/96	5/30/99
Publicly owned treatment works	VVV	10/26/99	10/26/02
Pulp and paper production (non-combust) MACT I	S	4/15/98	4/15/01
Pulp and paper production (combust) (Kraft, soda, sulfite) MACT II	MM	1/12/01	1/12/04

Table B (continued)

Categories of Major Sources	Subpart	Rule Promulgation Date	Compliance Date for Existing Sources (if applicable)
Pulp and paper production (non-chemical) MACT III	S	3/8/96	4/16/01
Quaternary ammonium compounds production (MON)	FFFF	11/10/03	11/10/06
Rayon production (Cellulose Production Manufacturing)	UUUU	6/11/02	6/11/05
Reciprocating Internal Combustion Engines	ZZZZ	6/15/04	6/15/07
Refractory Products Manufacturing	SSSSS	4/16/03	4/17/06
Reinforced plastic composites production	WWWW	4/21/03	4/21/06
Rubber chemicals manufacturing (MON)	FFFF	11/10/03	11/10/06
2,4- salts and esters production (Pesticide Active Ingredient Production)	MMM	6/23/99	12/23/03
Secondary aluminum prod.	RRR	3/23/00	3/24/03
Secondary lead smelting	X	6/23/95	6/23/97
Semiconductor manufacturing	BBBBB	5/22/03	5/22/06
Shipbuilding and ship repair (surface coating)	II	12/15/95	12/16/96
Site remediation	GGGGG	10/8/03	10/9/06
Sodium pentachlorophenolate production (Pesticide Active Ingredient Production)	MMM	6/23/99	12/23/03
Spandex production (Generic MACT)	YY	7/12/02	7/12/05
Stationary combustion turbines	YYYY	3/5/04	3/5/07
Steel pickling	CCC	6/22/99	6/22/01
Styrene-acrylonitrile production (Polymers and Resins IV)	JJJ	9/12/96	7/31/97
Styrene-butadiene rubber and latex prod. (Polymers and Resins I)	U	9/5/96	3/5/97
Symmetrical tetrachloropyridine production (MON)	FFFF	11/10/03	11/10/06
Taconite iron ore processing	RRRRR	10/30/03	10/30/06
Tetrahydrobenzaldehyde manufacture	F	5/12/98	5/12/01
Tire manufacturing	XXXX	7/9/02	7/11/05
Tordon™ acid production (Pesticide Active Ingredient Production)	MMM	6/23/99	12/23/03
Utility NESHAP	UUUUU	2/16/12	4/16/15
Vegetable oil production – solvent extraction	GGGG	4/12/01	4/12/04
Wood building products (surface coating)	QQQQ	5/28/03	5/28/06
Wood furniture	JJ	12/7/95	11/21/97
Wool fiberglass manufacturing	NNN	6/14/99	6/14/02



**Minnesota Pollution
Control Agency**

520 Lafayette Road North
St. Paul, MN 55155-4194

CAP-GI-09D

Requirements: NSPS (40 CFR pt. 60)

Air Quality Permit Program

Doc Type: Permit Application

Standards of Performance for New Stationary Sources (NSPS, New Source Performance Standards, 40 CFR pt. 60)

1a) AQ Facility ID No.: 08300007

1b) AQ File No.: 1724

2) Facility Name: Magellan Pipeline Co LP-Marshall Terminal

3) NSPS are federal rules that define limits, testing and monitoring for certain specific emission units. These standards are proposed and promulgated in the Federal Register and published in the Code of Federal Regulations, title 40 part 60 (40 CFR pt. 60). Table D lists the standards promulgated through December 2012. Table D may not be complete if a new NSPS has been promulgated since this form was last revised. The table contains:

- a brief emission source description;
- a corresponding 40 CFR pt. 60 subpart reference;
- an effective date for all performance standards promulgated as of December 2012;
- NSPS allowed by capped emissions permit in boldface type.

[Please note: the best way to keep up-to-date on NSPS regulations is through the U.S. Environmental Protection Agency's (EPA) webpage (<http://www.epa.gov>) or the Federal Register since there can be a significant time lag between the date when a standard is proposed or promulgated and when it is finally published in the Code of Federal Regulations.]

4) Please read through the emission sources in Table D. If you have modified (as defined in 40 CFR § 60.14), reconstructed (as defined in 40 CFR § 60.15) or constructed the described emission source on or after the effective date listed in the table, your facility may be subject to the requirements of 40 CFR pt. 60. Generally, reconstruction means that the cost of a repair exceeds 50 percent of what it would cost to install a new emission unit. If you have had an extensive and expensive repair, it may count as a reconstruction.

If you know or suspect standards may apply to your facility you must refer to the corresponding 40 CFR pt. 60 subpart and read the requirements in detail to make a final determination. Note: the general provisions found in 40 CFR pt. 60, subp. A, apply to all facilities subject to any other NSPS requirements.

5) After you review the list of sources subject to NSPS and read any applicable 40 CFR pt. 60 subparts, check one of the following boxes:

- ☐ No, my facility is not subject to a NSPS. Return to Form CAP-GI-09, and answer "No" to question 2b.
- ☒ Yes, my facility is subject to a NSPS. (Note that your facility can only be subject to a NSPS listed in boldface to be eligible for the capped permit.)

6) The following page lists information needed to identify your facility's emission sources subject to NSPS. Complete the group of questions for all emission equipment subject to NSPS, attaching additional pages if necessary.

7) For each applicable subpart (including Subpart A), include a copy of the applicable subpart with the applicable parts highlighted. For some standards, the Minnesota Pollution Control Agency (MPCA) has prepared a checklist version of the standard – for those subparts you may complete the checklist/form rather than highlighting a copy of the standard. See <http://www.pca.state.mn.us/nwqh472> for the subparts for which a checklist form has been prepared.

8) Return to Form CAP-GI-09D, and answer "Yes" to question 2b.

Describe Emission Equipment Loading Rack w/Vapor Combustor Control-Gasoline Loading
Emission Unit Number EU001 / EQUI 001
Stack/Vent Number SV001 / STRU 1
Date of Equipment Manufacture _____ (Month/Date/Year)
Date of Equipment Installation _____ (Month/Date/Year)
Date of Reconstruction (if applicable) _____ (Month/Date/Year)
Date of Modification (if applicable) _____ (Month/Date/Year)
Applicable 40 CFR pt. 60 subpart or Federal Register Reference Bulk Gasoline Terminals (Subpart XX)
This source is also subject to the general provisions of 40 CFR pt. 60, subp. A.
Has this Unit Been Permitted Previously?
☐ No
☒ Yes, list Air Emission Permit Number 08300007-003
Have you attached a photocopied, highlighted version of the 40 CFR pt. 60 subpart?
☒ Yes
☐ No

Describe Emission Equipment Gasoline Tank
Emission Unit Number TK 011
Stack/Vent Number _____
Date of Equipment Manufacture 1997 (Month/Date/Year)
Date of Equipment Installation 1997 (Month/Date/Year)
Date of Reconstruction (if applicable) _____ (Month/Date/Year)
Date of Modification (if applicable) _____ (Month/Date/Year)
Applicable 40 CFR pt. 60 subpart or Federal Register Reference Volatile Organic Liquid Storage Vessels (Subpart Kb)
This source is also subject to the general provisions of 40 CFR pt. 60, subp. A.
Has this Unit Been Permitted Previously?
☐ No
☒ Yes, list Air Emission Permit Number 08300007-003
Have you attached a photocopied, highlighted version of the 40 CFR pt. 60 subpart?
☒ Yes
☐ No

Describe Emission Equipment _____
Emission Unit Number _____
Stack/Vent Number _____
Date of Equipment Manufacture _____ (Month/Date/Year)
Date of Equipment Installation _____ (Month/Date/Year)
Date of Reconstruction (if applicable) _____ (Month/Date/Year)
Date of Modification (if applicable) _____ (Month/Date/Year)
Applicable 40 CFR pt. 60 subpart or Federal Register Reference _____
This source is also subject to the general provisions of 40 CFR pt. 60, subp. A.
Has this Unit Been Permitted Previously?
☐ No
☐ Yes, list Air Emission Permit Number _____
Have you attached a photocopied, highlighted version of the 40 CFR pt. 60 subpart?
☐ Yes
☐ No

Table D: Standards of Performance for New Stationary Sources

If a facility is subject to an NSPS listed in **boldface**, it is still eligible for a capped permit. ***
(If a facility is subject to an NSPS other than those listed in boldface, it is not eligible for a capped permit.)

Performance standards promulgated as of December, 2012

Source categories subject to federal performance standards	40 CFR 60 Subpart	Effective date constructed, modified or reconstructed
Fossil-Fuel Fired Steam Generators >250 MMBtu	D	After: 08/17/71
Electric Utility Steam Generators >250 MMBtu	Da	After: 09/18/78
Industrial-Commercial-Institutional Steam Generators >100 MMBtu	Db	After: 06/19/84
Small Industrial-Commercial-Institutional Steam Generators >10 MMBtu but <100 MMBtu	Dc*	After: 06/09/89
Coal-Fired Electric Steam Generating Units (Hg Budget units)	HHHH	Varies (applies to any unit serving a generator ≥ 25 MWe on or after 11/15/90)
Solid Waste Incinerators	E, CCCC, DDDD, EEEE, FFFF	Varies
Sewage Sludge Incinerators	LLLL, MMMM	After: 10/14/10
Hospital/Medical/Infectious Waste Incinerators	EC, CE	Initial Construction
Municipal Waste Combustors	CB, EA, EB, AAAA, BBBB	Varies
Portland Cement Plants	F	After: 08/17/71
Nitric Acid Plants	G, GA	After: 08/17/71
Sulfuric Acid Plants	H, CD	Initial Construction
Asphalt Concrete Plants	I*	After: 06/11/73
Petroleum Refineries	J, JA	After: 06/11/73
Storage Vessels for Petroleum Liquids	K*,KA*	After: 06/11/73
Volatile Organic Liquid Storage Vessels (Including Petroleum Liquids)	KB*	After: 07/23/84
Secondary Lead Smelters	L	After: 06/11/73
Secondary Brass and Bronze Production Plants	M	After: 06/11/73
Oxygen Process Furnaces	N	After: 06/11/73
Oxygen Process Steelmaking Facilities	NA	After: 01/20/83
Sewage Treatment Plants	O	After: 06/11/73
Primary Copper Smelters	P	After: 10/16/74
Primary Zinc Smelters	Q	After: 10/16/74
Primary Lead Smelters	R	After: 10/16/74
Primary Aluminum Reduction Plants	S	After: 10/23/74
Phosphate Fertilizer Industry	T,U,V,W,X	After: 10/22/74
Coal Preparation Plants	Y	After: 10/24/74
Ferroalloy Production Facilities	Z	After: 10/24/74
Steel Plants	AA, AAA	After: 10/21/74
Kraft Pulp Mills	BB	After: 09/24/76
Glass Manufacturing Plants	CC	After: 06/15/79
Grain Elevators	DD*	After: 08/03/78
Surface Coating of Metal Furniture	EE*	After: 11/28/80
Stationary Gas Turbines	GG*	After: 10/03/77
Stationary Gas Turbines 10 MMBtu or larger	KKKK	After: 02/18/05
Lime Manufacturing Plants	HH	After: 05/03/77

Performance standards promulgated as of December, 2012

Source categories subject to federal performance standards	40 CFR 60 Subpart	Effective date constructed, modified or reconstructed
Lead-Acid Battery Manufacturing Plants	KK	After: 01/14/80
Metallic Mineral Processing Plants	LL	After: 08/24/82
Automobile and Light-Duty Truck Surface Coating Operations	MM	After: 10/05/79
Phosphate Rock Plants	NN	After: 09/21/79
Ammonium Sulfate Manufacture	PP	After: 02/04/80
Graphic Arts Industry: Publication Rotogravure Printing	QQ	After: 08/28/80
Pressure Sensitive Tape and Label Surface Coating Operations	RR	After: 12/30/80
Industrial Surface Coating: Large Appliances	SS*	After: 12/24/80
Metal Coil Surface Coating	TT	After: 01/05/81
Asphalt Processing and Asphalt Roofing Manufacture	UU	After: 11/18/80
Equipment Leaks of Volatile Organic Compounds (VOCs) in the Synthetic Organic Chemicals Manufacturing Industry	VV, VVA	After: 01/05/81
Beverage Can Surface Coating Industry	WW	After: 11/26/80
Bulk Gasoline Terminals	XX*	After: 12/17/80
New Residential Wood Heaters **	AAA	After: 07/01/88
Rubber Tire Manufacturing Industry	BBB	After: 01/20/83
VOC Emissions from the Polymer Manufacturing Industry	DDD	After: 09/30/87
Flexible Vinyl and Urethane Coating and Printing	FFF	After: 01/18/83
Equipment Leaks of VOC in Petroleum Refineries	GGG, GGGA	After: 01/04/83
Synthetic Fiber Production Facilities	HHH	After: 11/23/82
VOC Emissions from the Synthetic Organic Chemical Manufacturing Industry Air Oxidation Unit Processes	III	After: 10/21/83
Petroleum Dry Cleaners	JJJ*	After: 12/14/82
Onshore Natural Gas Processing: VOC Equipment Leaks and SO ₂ Emissions	KKK, LLL	After: 01/20/84
VOC Emissions from Synthetic Organic Chemical Manufacturing Industry Distillation Operations	NNN	After: 12/30/83
Nonmetallic Mineral Processing Plants (Including Sand and Gravel Processing)	OOO*	After: 08/31/83
Wool Fiberglass Insulation Manufacturing Plants	PPP	After: 02/07/84
VOC Emissions from Petroleum Refinery Wastewater Systems	QQQ	After: 05/04/87
VOC Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes	RRR	After: 06/29/90
Magnetic Tape Coating Facilities	SSS	After: 01/22/86
Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	TTT*	After: 01/08/86
Calciners and Dryers in Mineral Industries	UUU	After: 04/23/86
Polymeric Coating of Supporting Substrates Facilities	VVV	After: 04/30/87
Municipal Solid Waste Landfills	WWW, Cc	Initial Construction
Stationary Compression Ignition Internal Combustion Engines	III	After: 07/11/05
Stationary Spark Ignition Internal Combustion Engines	JJJJ	After: 06/12/06
Crude Oil and Natural Gas Production, Transmission, and Distribution	OOOO	After: 08/23/11

* Checklist versions of regulation available from the MPCA. Contact the MPCA at 651- 296-6300 or 1-800-657-3864 for copies. Also available online at <http://www.pca.state.mn.us/air/permits/forms.html#12>.

** According to Minn. R. 7007.0300, subp. 1(B), "any stationary source that would be required to obtain a permit solely because it is subject to Code of Federal Regulations, title 40, part 60, subp. AAA" is exempt from permitting.

*** Minn. R. 7007.1140, subp. 2 (E) lists the 13 NSPS that a facility can be subject to and still be eligible for a capped permit.

1a) AQ Facility ID number: 08300007

1b) Agency Interest ID number: 1724

2) Facility Name: Magellan Pipeline Co LP-Marshall Terminal

Instructions: An owner or operator may fill in this form in replacement of a highlighted copy of the New Source Performance Standard (NSPS) located in 40 CFR 60, Subpart A — General Provisions.

This form has been filled out specific to NSPS XX

NSPS Provision	Check if applicable
Section 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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
Section 60.2 Definitions (reference rule for additional detail)	
Section 60.3 Units and abbreviations (reference rule for additional detail)	
Section 60.4 Address (abbreviated for facilities located in Minnesota)	
(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 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.	<input checked="" type="checkbox"/>
(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: (25) Minnesota Pollution Control Agency, Division of Air Quality, 520 Lafayette Road, St. Paul, MN 55155.	<input checked="" type="checkbox"/>
Section 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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
Section 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.	<input checked="" type="checkbox"/>

NSPS Provision	Check if applicable
(b)(1) A separate request shall be submitted for each construction or modification project.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
Section 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:	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(2) [Reserved]	
(3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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:	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>

NSPS Provision

Check if
applicable

- (1) If the total duration of excess emissions for the reporting period is less than one percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than five 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 one percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is five 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—SAMPLE 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: Total source operating time in reporting period 1

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

¹ For opacity, record all times in minutes. For gases, record all times in hours.

² For 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

NSPS Provision

Check if
applicable

(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.

NSPS Provision

Check if applicable

<p>(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.</p>	<input type="checkbox"/>
<p>(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.</p>	<input type="checkbox"/>
<p>(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:</p>	<input checked="" type="checkbox"/>
<p>(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.</p>	<input type="checkbox"/>
<p>(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.</p>	<input type="checkbox"/>
<p>(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.</p>	<input checked="" type="checkbox"/>
<p>(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.</p>	<input checked="" type="checkbox"/>
<p>(h) Individual subparts of this part may include specific provisions which clarify or make inapplicable the provisions set forth in this section.</p>	<input checked="" type="checkbox"/>
<p>Section 60.8 Performance Tests</p>	
<p>(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).</p>	<input checked="" type="checkbox"/>
<p>(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.</p>	<input checked="" type="checkbox"/>

NSPS Provision	Check if applicable
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(2) Safe sampling platform(s).	<input checked="" type="checkbox"/>
(3) Safe access to sampling platform(s).	<input checked="" type="checkbox"/>
(4) Utilities for sampling and testing equipment.	<input checked="" type="checkbox"/>
(f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>

NSPS Provision	Check if applicable
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(g) The performance testing shall include a test method performance audit (PA) during the performance test. <i>(abridged – See rule for additional detail)</i>	<input checked="" type="checkbox"/>
(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. <i>(abridged – See rule for additional detail)</i>	<input checked="" type="checkbox"/>
(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:	<input checked="" type="checkbox"/>
(i) Preparing the sample;	<input checked="" type="checkbox"/>
(ii) Confirming the true concentration of the sample;	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(iv) Providing the opportunity for the compliance authority to comment on the selected concentration level for an audit sample;	<input checked="" type="checkbox"/>
(v) Distributing the sample to the user in a manner that guarantees that the true value of the sample is unknown to the user;	<input checked="" type="checkbox"/>
(vi) Recording the measured concentration reported by the user and determining if the measured value is within acceptable limits;	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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;	<input checked="" type="checkbox"/>

NSPS Provision	Check if applicable
(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.	<input checked="" type="checkbox"/>
(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:	<input checked="" type="checkbox"/>
(i) Checking audit samples to confirm their true value as reported by the AASP;	<input checked="" type="checkbox"/>
(ii) Performing technical systems audits of the AASP's facilities and operating procedures at least once every two years;	<input checked="" type="checkbox"/>
(iii) Providing standards for use by the voluntary consensus standard body to approve the accrediting body that will accredit the audit sample providers.	<input checked="" type="checkbox"/>
(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). (<i>abridged – See rule for additional detail</i>)	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
Section 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.)	<input checked="" type="checkbox"/>
Section 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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
Section 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.	<input checked="" type="checkbox"/>
(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).	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input checked="" type="checkbox"/>

NSPS Provision	Check if applicable
(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. <i>(abridged – See rule for additional detail)</i>	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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 .	<input type="checkbox"/>
(f) Special provisions set forth under an applicable subpart shall supersede any conflicting provisions in paragraphs (a) through (e) of this section.	<input checked="" type="checkbox"/>

NSPS Provision	Check if applicable
(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.	<input checked="" type="checkbox"/>
Section 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.	<input checked="" type="checkbox"/>
Section 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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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, <i>(abridged – See rule for additional detail)</i>	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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. <i>(abridged – See rule for additional detail)</i>	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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:	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input checked="" type="checkbox"/>

NSPS Provision	Check if applicable
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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:	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(iii) 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.	<input type="checkbox"/>
(iv) For each full or partial operating hour, all valid data points shall be used to calculate the hourly average.	<input type="checkbox"/>
(v) 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.	<input type="checkbox"/>
(vi) 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.	<input type="checkbox"/>
(vii) 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)).	<input type="checkbox"/>
(viii) 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 O ₂ or ng/J of pollutant).	<input type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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:	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(2) Alternative monitoring requirements when the affected facility is infrequently operated.	<input checked="" type="checkbox"/>
(3) Alternative monitoring requirements to accommodate continuous monitoring systems that require additional measurements to correct for stack moisture conditions.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>

NSPS Provision	Check if applicable
(5) Alternative methods of converting pollutant concentration measurements to units of the standards.	<input type="checkbox"/>
(6) Alternative procedures for performing daily checks of zero and span drift that do not involve use of span gases or test cells.	<input type="checkbox"/>
(7) Alternatives to the A.S.T.M. test methods or sampling procedures specified by any subpart.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(j) An alternative to the relative accuracy (RA) test specified in Performance Specification 2 of appendix B may be requested as follows:	<input type="checkbox"/>
(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).	<input type="checkbox"/>
(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.	<input type="checkbox"/>
Section 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.	<input checked="" type="checkbox"/>
(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:	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>

NSPS Provision	Check if applicable
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(d) [Reserved]	
(e) The following shall not, by themselves, be considered modifications under this part:	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.	<input checked="" type="checkbox"/>
(3) An increase in the hours of operation.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(6) The relocation or change in ownership of an existing facility.	<input checked="" type="checkbox"/>
(f) Special provisions set forth under an applicable subpart of this part shall supersede any conflicting provisions of this section.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(2) This exemption shall not apply to any new unit that:	<input type="checkbox"/>
(i) Is designated as a replacement for an existing unit;	<input type="checkbox"/>
(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	<input type="checkbox"/>

NSPS Provision	Check if applicable
(k) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project is exempt from the requirements of this section. <i>(abridged – See rule for additional detail)</i>	<input type="checkbox"/>
(l) The reactivation of a very clean coal-fired electric utility steam generating unit is exempt from the requirements of this section.	<input type="checkbox"/>
Section 60.15 Reconstruction	
(a) An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate.	<input checked="" type="checkbox"/>
(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	<input checked="" type="checkbox"/>
(2) It is technologically and economically feasible to meet the applicable standards set forth in this part.	<input checked="" type="checkbox"/>
(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:	<input checked="" type="checkbox"/>
(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.	
Section 60.16 Priority list	
Section 60.17 Incorporations by reference	
Section 60.18 General control device and work practice requirements	
(a) <i>Introduction.</i> (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) <i>Flares.</i> Paragraphs (c) through (f) apply to flares.	<input type="checkbox"/>

NSPS Provision	Check if applicable
(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.	<input type="checkbox"/>
(2) Flares shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f).	<input type="checkbox"/>
(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.	<input type="checkbox"/>
<p>(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:</p> $V_{max} = (X_{H_2} - K_1) \cdot K_2$ <p>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.</p> <p>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).</p> <p>(B) The actual exit velocity of a flare shall be determined by the method specified in paragraph (f)(4) of this section.</p>	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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).	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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).	<input type="checkbox"/>
(6) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
<p>(3) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:</p> $H_T = K \sum_{i=1}^n C_i H_i$	<input type="checkbox"/>

NSPS Provision

Check if
applicable

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;

$$K = \text{Constant}, \frac{1}{1.740 \times 10^{-7}} \left(\frac{1}{\text{ppm}} \right) \left(\frac{\text{g mole}}{\text{scm}} \right) \left(\frac{\text{MJ}}{\text{kcal}} \right)$$

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.

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(5) The maximum permitted velocity, V_{max} , for flares complying with paragraph (c)(4)(iii) shall be determined by the following equation.

$$\log_{10} (V_{max}) = (H_T + 28.8) / 31.7$$

V_{max} =Maximum permitted velocity, M/sec

28.8=Constant

31.7=Constant

H_T =The net heating value as determined in paragraph (f)(3).

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(6) The maximum permitted velocity, V_{max} , for air-assisted flares shall be determined by the following equation.

$$V_{max} = 8.706 + 0.7084 (H_T)$$

V_{max} =Maximum permitted velocity, m/sec

8.706=Constant

0.7084=Constant

H_T =The net heating value as determined in paragraph (f)(3).

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(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.

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(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:

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(i) Any emissions imaged by the optical gas instrument;

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(ii) Indications of liquids dripping;

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NSPS Provision	Check if applicable
(iii) Indications by a sensor that a seal or barrier fluid system has failed; or	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(4) The schedule for repair is as required in the applicable subpart.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(6) When this alternative work practice is used for detecting leaking equipment the following are not applicable for the equipment being monitored:	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(1) Instrument Specifications. The optical gas imaging instrument must comply with the requirements in (i)(1)(i) and (i)(1)(ii) of this section	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(ii) Provide a date and time stamp for video records of every monitoring event.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>

NSPS Provision

Check if applicable

$$E_{dic} = (E_{std}) \sum_{i=1}^k x_i$$

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_{std} .

E_{std} = 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. ☐

NSPS Provision	Check if applicable
(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 .	<input type="checkbox"/>
Section 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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>

Table 1 to Subpart A to Part 60-Detection Sensitivity Levels (grams per hour)

Monitoring frequency per subpart ^a	Detection sensitivity level
Bi-Monthly	60
Semi-Quarterly	85
Monthly	100

^a When 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.

(abridged – See rule for additional detail)



Minnesota Pollution Control Agency

520 LAFAYETTE ROAD NO., ST. PAUL, MN 55155-4194

NSPS FORM — NSPS-XX SUBPART XX Check-OFF FORM July 11, 2005

I. Introduction

An owner or operator may fill in this form in replacement of a highlighted copy of the New Source Performance Standard (NSPS) located in 40 CFR 60, Subpart XX — Standards of Performance for Bulk Gasoline Terminals.

Please be aware that all facilities subject to this NSPS are also subject to 40 CFR 60 Subpart A - General Provisions. Where this NSPS refers to portions of Subpart A (§60.1 to §60.19), please copy those referenced portions of Subpart A and check off the specific items that apply to your facility.

You can find the most recent version of 40 CFR 60, subpart A on EPA's website at <http://www.epa.gov/epacfr40/chapt-1.info/chi-toc.htm/>. A formatted version of subpart A (Form NSPS-A) with check off boxes is available on the MPCA's website, at <http://www.pca.state.mn.us/air/permits/forms.html>.

NSPS PROVISION	<input checked="" type="checkbox"/> if APPLICABLE
Location and Language	
Section 60.500 Applicability and designation of affected facility.	<input checked="" type="checkbox"/>
(a) The affected facility to which the provisions of this subpart apply is the total of all the loading racks at a bulk gasoline terminal which deliver liquid product into gasoline tank trucks.	<input checked="" type="checkbox"/>
(b) Each facility under paragraph (a) of this section, the construction or modification of which is commenced after December 17, 1980, is subject to the provisions of this subpart.	<input checked="" type="checkbox"/>
(c) For purposes of this subpart, any replacement of components of an existing facility, described in paragraph (a) of this section, commenced before August 18, 1983 in order to comply with any emission standard adopted by a State or political subdivision thereof will not be considered a reconstruction under the provisions of 40 CFR 60.15.	<input type="checkbox"/>
Note: The intent of these standards is to minimize the emissions of VOC through the application of best demonstrated technologies (BDT). The numerical emission limits in this standard are expressed in terms of total organic compounds. This emission limit reflects the performance of BDT.	
Section 60.501 Definitions.	
The terms used in this subpart are defined in the Clean Air Act, in §60.2 of this part, or in this section as follows: <i>Bulk gasoline terminal</i> means any gasoline facility which receives gasoline by pipeline, ship or barge, and has a gasoline throughput greater than 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal, State or local law and discoverable by the Administrator and any other person. <i>Continuous vapor processing system</i> means a vapor processing system that treats total organic compounds vapors collected from gasoline tank trucks on a demand basis without intermediate accumulation in a vapor holder. <i>Existing vapor processing system</i> means a vapor processing system [capable of achieving emissions to the atmosphere no greater than 80 milligrams of total organic compounds per liter of gasoline loaded], the construction or refurbishment of which was commenced before December 17, 1980, and which was not constructed or refurbished after that date. <i>Flare</i> means a thermal oxidation system using an open (without enclosure) flame.	

NSPS PROVISION Location and Language	<input checked="" type="checkbox"/> if APPLICABLE
Section 60.501 Definitions. (continued)	
<i>Gasoline</i> means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater which is used as a fuel for internal combustion engines.	
<i>Gasoline tank truck</i> means a delivery tank truck used at bulk gasoline terminals which is loading gasoline or which has loaded gasoline on the immediately previous load.	
<i>Intermittent vapor processing system</i> means a vapor processing system that employs an intermediate vapor holder to accumulate total organic compounds vapors collected from gasoline tank trucks, and treats the accumulated vapors only during automatically controlled cycles.	
<i>Loading rack</i> means the loading arms, pumps, meters, shutoff valves, relief valves, and other piping and valves necessary to fill delivery tank trucks.	
<i>Refurbishment</i> means, with reference to a vapor processing system, replacement of components of, or addition of components to, the system within any 2-year period such that the fixed capital cost of the new components required for such component replacement or addition exceeds 50 percent of the cost of a comparable entirely new system.	
<i>Thermal oxidation system</i> means a combustion device used to mix and ignite fuel, air pollutants, and air to provide a flame to heat and oxidize hazardous air pollutants. Auxiliary fuel may be used to heat air pollutants to combustion temperatures.	
<i>Total organic compounds</i> means those compounds measured according to the procedures in §60.503.	
<i>Vapor collection system</i> means any equipment used for containing total organic compounds vapors displaced during the loading of gasoline tank trucks.	
<i>Vapor processing system</i> means all equipment used for recovering or oxidizing total organic compounds vapors displaced from the affected facility.	
<i>Vapor-tight gasoline tank truck</i> means a gasoline tank truck which has demonstrated within the 12 preceding months that its product delivery tank will sustain a pressure change of not more than 750 pascals (75 mm of water) within 5 minutes after it is pressurized to 4,500 pascals (450 mm of water). This capability is to be demonstrated using the pressure test procedure specified in Method 27.	
Section 60.502 Standard for Volatile Organic Compound (VOC) emissions from bulk gasoline terminals.	<input checked="" type="checkbox"/>
On and after the date on which §60.8(a) requires a performance test to be completed, the owner or operator of each bulk gasoline terminal containing an affected facility shall comply with the requirements of this section.	<input checked="" type="checkbox"/>
(a) Each affected facility shall be equipped with a vapor collection system designed to collect the total organic compounds vapors displaced from tank trucks during product loading.	<input checked="" type="checkbox"/>
(b) The emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tank trucks are not to exceed 35 milligrams of total organic compounds per liter of gasoline loaded, except as noted in paragraph (c) of this section.	<input checked="" type="checkbox"/>
(c) For each affected facility equipped with an existing vapor processing system, the emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tank trucks are not to exceed 80 milligrams of total organic compounds per liter of gasoline loaded.	<input checked="" type="checkbox"/>
(d) Each vapor collection system shall be designed to prevent any total organic compounds vapors collected at one loading rack from passing to another loading rack.	<input checked="" type="checkbox"/>

NSPS PROVISION Location and Language	<input checked="" type="checkbox"/> if APPLICABLE
Section 60.502 Standard for Volatile Organic Compound (VOC) emissions from bulk gasoline terminals. (continued)	<input checked="" type="checkbox"/>
(e) Loadings of liquid product into gasoline tank trucks shall be limited to vapor-tight gasoline tank trucks using the following procedures:	<input checked="" type="checkbox"/>
(1) The owner or operator shall obtain the vapor tightness documentation described in §60.505(b) for each gasoline tank truck which is to be loaded at the affected facility.	<input checked="" type="checkbox"/>
(2) The owner or operator shall require the tank identification number to be recorded as each gasoline tank truck is loaded at the affected facility.	<input checked="" type="checkbox"/>
(3) (i) The owner or operator shall cross-check each tank identification number obtained in paragraph (e)(2) of this section with the file of tank vapor tightness documentation within 2 weeks after the corresponding tank is loaded, unless either of the following conditions is maintained:	<input checked="" type="checkbox"/>
(A) If less than an average of one gasoline tank truck per month over the last 26 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed each quarter; or	<input type="checkbox"/>
(B) If less than an average of one gasoline tank truck per month over the last 52 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed semiannually.	<input type="checkbox"/>
(ii) If either the quarterly or semiannual cross-check provided in paragraphs (e)(3)(i) (A) through (B) of this section reveals that these conditions were not maintained, the source must return to biweekly monitoring until such time as these conditions are again met.	<input type="checkbox"/>
(4) The terminal owner or operator shall notify the owner or operator of each non-vapor-tight gasoline tank truck loaded at the affected facility within 1 week of the documentation cross-check in paragraph (e)(3) of this section.	<input checked="" type="checkbox"/>
(5) The terminal owner or operator shall take steps assuring that the nonvapor-tight gasoline tank truck will not be reloaded at the affected facility until vapor tightness documentation for that tank is obtained.	<input checked="" type="checkbox"/>
(6) Alternate procedures to those described in paragraphs (e)(1) through (5) of this section for limiting gasoline tank truck loadings may be used upon application to, and approval by, the Administrator.	<input type="checkbox"/>
(f) The owner or operator shall act to assure that loadings of gasoline tank trucks at the affected facility are made only into tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system.	<input checked="" type="checkbox"/>
(g) The owner or operator shall act to assure that the terminal's and the tank truck's vapor collection systems are connected during each loading of a gasoline tank truck at the affected facility. Examples of actions to accomplish this include training drivers in the hookup procedures and posting visible reminder signs at the affected loading racks.	<input type="checkbox"/>
(h) The vapor collection and liquid loading equipment shall be designed and operated to prevent gauge pressure in the delivery tank from exceeding 4,500 pascals (450 mm of water) during product loading. This level is not to be exceeded when measured by the procedures specified in §60.503(d).	<input checked="" type="checkbox"/>
(i) No pressure-vacuum vent in the bulk gasoline terminal's vapor collection system shall begin to open at a system pressure less than 4,500 pascals (450 mm of water).	<input checked="" type="checkbox"/>
(j) Each calendar month, the vapor collection system, the vapor processing system, and each loading rack handling gasoline shall be inspected during the loading of gasoline tank trucks for total organic compounds liquid or vapor leaks. For purposes of this paragraph, detection methods incorporating sight, sound, or smell are acceptable. Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected.	<input checked="" type="checkbox"/>
Section 60.503 Test methods and procedures.	<input checked="" type="checkbox"/>
(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). The three-run requirement of §60.8(f) does not apply to this subpart.	<input checked="" type="checkbox"/>

NSPS PROVISION Location and Language	<input checked="" type="checkbox"/> if APPLICABLE
Section 60.503 Test methods and procedures. (continued)	<input checked="" type="checkbox"/>
(b) Immediately before the performance test required to determine compliance with §60.502 (b), (c), and (h), the owner or operator shall use Method 21 to monitor for leakage of vapor all potential sources in the terminal's vapor collection system equipment while a gasoline tank truck is being loaded. The owner or operator shall repair all leaks with readings of 10,000 ppm (as methane) or greater before conducting the performance test.	<input checked="" type="checkbox"/>
(c) The owner or operator shall determine compliance with the standards in §60.502 (b) and (c) as follows:	<input checked="" type="checkbox"/>
(1) The performance test shall be 6 hours long during which at least 300,000 liters of gasoline is loaded. If this is not possible, the test may be continued the same day until 300,000 liters of gasoline is loaded or the test may be resumed the next day with another complete 6-hour period. In the latter case, the 300,000-liter criterion need not be met. However, as much as possible, testing should be conducted during the 6-hour period in which the highest throughput normally occurs.	<input checked="" type="checkbox"/>
(2) If the vapor processing system is intermittent in operation, the performance test shall begin at a reference vapor holder level and shall end at the same reference point. The test shall include at least two startups and shutdowns of the vapor processor. If this does not occur under automatically controlled operations, the system shall be manually controlled.	<input checked="" type="checkbox"/>
(3) The emission rate (E) of total organic compounds shall be computed using the following equation: $E = K \sum_{i=1}^n (V_{esi} C_{ei}) / (L 10^6)$ where: E = emission rate of total organic compounds, mg/liter of gasoline loaded. V _{esi} = volume of air-vapor mixture exhausted at each interval "i", scm. C _{ei} = concentration of total organic compounds at each interval "i", ppm. L = total volume of gasoline loaded, liters. n = number of testing intervals. i = emission testing interval of 5 minutes. K = density of calibration gas, 1.83×10 ⁶ for propane and 2.41×10 ⁶ for butane, mg/scm.	<input checked="" type="checkbox"/>
(4) The performance test shall be conducted in intervals of 5 minutes. For each interval "i", readings from each measurement shall be recorded, and the volume exhausted (V _{esi}) and the corresponding average total organic compounds concentration (C _{ei}) shall be determined. The sampling system response time shall be considered in determining the average total organic compounds concentration corresponding to the volume exhausted.	<input checked="" type="checkbox"/>
(5) The following methods shall be used to determine the volume (V _{esi}) air-vapor mixture exhausted at each interval:	<input checked="" type="checkbox"/>
(i) Method 2B shall be used for combustion vapor processing systems.	<input checked="" type="checkbox"/>
(ii) Method 2A shall be used for all other vapor processing systems.	<input checked="" type="checkbox"/>
(6) Method 25A or 25B shall be used for determining the total organic compounds concentration (C _{ei}) at each interval. The calibration gas shall be either propane or butane. The owner or operator may exclude the methane and ethane content in the exhaust vent by any method (e.g., Method 18) approved by the Administrator.	<input checked="" type="checkbox"/>
(7) To determine the volume (L) of gasoline dispensed during the performance test period at all loading racks whose vapor emissions are controlled by the processing system being tested, terminal records or readings from gasoline dispensing meters at each loading rack shall be used.	<input checked="" type="checkbox"/>

NSPS PROVISION Location and Language	<input checked="" type="checkbox"/> if APPLICABLE
Section 60.503 Test methods and procedures. (continued)	<input checked="" type="checkbox"/>
(d) The owner or operator shall determine compliance with the standard in §60.502(h) as follows:	<input checked="" type="checkbox"/>
(1) A pressure measurement device (liquid manometer, magnehelic gauge, or equivalent instrument), capable of measuring up to 500 mm of water gauge pressure with ± 2.5 mm of water precision, shall be calibrated and installed on the terminal's vapor collection system at a pressure tap located as close as possible to the connection with the gasoline tank truck.	<input checked="" type="checkbox"/>
(2) During the performance test, the pressure shall be recorded every 5 minutes while a gasoline truck is being loaded; the highest instantaneous pressure that occurs during each loading shall also be recorded. Every loading position must be tested at least once during the performance test.	<input checked="" type="checkbox"/>
(e) The performance test requirements of paragraph (c) of this section do not apply to flares defined in §60.501 and meeting the requirements in §60.18(b) through (f). The owner or operator shall demonstrate that the flare and associated vapor collection system is in compliance with the requirements in §§60.18(b) through (f) and 60.503(a), (b), and (d).	<input type="checkbox"/>
(f) The owner or operator shall use alternative test methods and procedures in accordance with the alternative test method provisions in §60.8(b) for flares that do not meet the requirements in §60.18(b).	<input type="checkbox"/>
Section 60.504	
Reserved	
Section 60.505 Reporting and recordkeeping.	<input checked="" type="checkbox"/>
(a) The tank truck vapor tightness documentation required under §60.502(e)(1) shall be kept on file at the terminal in a permanent form available for inspection.	<input checked="" type="checkbox"/>
(b) The documentation file for each gasoline tank truck shall be updated at least once per year to reflect current test results as determined by Method 27. This documentation shall include, as a minimum, the following information:	<input checked="" type="checkbox"/>
(1) Test title: Gasoline Delivery Tank Pressure Test—EPA Reference Method 27.	<input checked="" type="checkbox"/>
(2) Tank owner and address.	<input checked="" type="checkbox"/>
(3) Tank identification number.	<input checked="" type="checkbox"/>
(4) Testing location.	<input checked="" type="checkbox"/>
(5) Date of test.	<input checked="" type="checkbox"/>
(6) Tester name and signature.	<input checked="" type="checkbox"/>
(7) Witnessing inspector, if any: Name, signature, and affiliation.	<input checked="" type="checkbox"/>
(8) Test results: Actual pressure change in 5 minutes, mm of water (average for 2 runs).	<input checked="" type="checkbox"/>
(c) A record of each monthly leak inspection required under §60.502(j) shall be kept on file at the terminal for at least 2 years. Inspection records shall include, as a minimum, the following information:	<input checked="" type="checkbox"/>
(1) Date of inspection.	<input checked="" type="checkbox"/>
(2) Findings (may indicate no leaks discovered; or location, nature, and severity of each leak).	<input checked="" type="checkbox"/>
(3) Leak determination method.	<input checked="" type="checkbox"/>
(4) Corrective action (date each leak repaired; reasons for any repair interval in excess of 15 days).	<input checked="" type="checkbox"/>
(5) Inspector name and signature.	<input checked="" type="checkbox"/>
(d) The terminal owner or operator shall keep documentation of all notifications required under §60.502(e)(4) on file at the terminal for at least 2 years.	<input type="checkbox"/>
(e) As an alternative to keeping records at the terminal of each gasoline cargo tank test result as required in paragraphs (a), (c), and (d) of this section, an owner or operator may comply with the requirements in either paragraph (e)(1) or (2) of this section.	<input checked="" type="checkbox"/>
(1) An electronic copy of each record is instantly available at the terminal.	<input type="checkbox"/>

NSPS PROVISION Location and Language	<input checked="" type="checkbox"/> if APPLICABLE
Section 60.505 Reporting and recordkeeping. (continued)	<input checked="" type="checkbox"/>
(i) The copy of each record in paragraph (e)(1) of this section is an exact duplicate image of the original paper record with certifying signatures.	<input type="checkbox"/>
(ii) The permitting authority is notified in writing that each terminal using this alternative is in compliance with paragraph (e)(1) of this section.	<input type="checkbox"/>
(2) For facilities that utilize a terminal automation system to prevent gasoline cargo tanks that do not have valid cargo tank vapor tightness documentation from loading (e.g., via a card lock-out system), a copy of the documentation is made available (e.g., via facsimile) for inspection by permitting authority representatives during the course of a site visit, or within a mutually agreeable time frame.	<input checked="" type="checkbox"/>
(i) The copy of each record in paragraph (e)(2) of this section is an exact duplicate image of the original paper record with certifying signatures.	<input checked="" type="checkbox"/>
(ii) The permitting authority is notified in writing that each terminal using this alternative is in compliance with paragraph (e)(2) of this section.	<input checked="" type="checkbox"/>
(f) The owner or operator of an affected facility shall keep records of all replacements or additions of components performed on an existing vapor processing system for at least 3 years.	<input checked="" type="checkbox"/>
Section 60.506 Reconstruction.	<input type="checkbox"/>
For purposes of this subpart:	
(a) The cost of the following frequently replaced components of the affected facility shall not be considered in calculating either the "fixed capital cost of the new components" or the "fixed capital costs that would be required to construct a comparable entirely new facility" under §60.15: pump seals, loading arm gaskets and swivels, coupler gaskets, overfill sensor couplers and cables, flexible vapor hoses, and grounding cables and connectors.	<input type="checkbox"/>
(b) Under §60.15, the "fixed capital cost of the new components" includes the fixed capital cost of all depreciable components (except components specified in §60.506(a)) which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following December 17, 1980. For purposes of this paragraph, "commenced" means that an owner or operator has undertaken a continuous program of component replacement or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of component replacement.	<input type="checkbox"/>

1a) **AQ Facility ID number:** 08300007 1b) **Agency Interest ID number:** 1724

2) **Facility Name:** Magellan Pipeline Co LP-Marshall Terminal

Instructions: An owner or operator may fill in this form in replacement of a highlighted copy of the New Source Performance Standard (NSPS) located in 40 CFR 60, Subpart A — General Provisions.

This form has been filled out specific to NSPS Kb

NSPS Provision	Check if applicable
Section 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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
Section 60.2 Definitions (reference rule for additional detail)	
Section 60.3 Units and abbreviations (reference rule for additional detail)	
Section 60.4 Address (abbreviated for facilities located in Minnesota)	
(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 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.	<input checked="" type="checkbox"/>
(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: (25) Minnesota Pollution Control Agency, Division of Air Quality, 520 Lafayette Road, St. Paul, MN 55155.	<input checked="" type="checkbox"/>
Section 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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
Section 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.	<input checked="" type="checkbox"/>

NSPS Provision	Check if applicable
(b)(1) A separate request shall be submitted for each construction or modification project.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
Section 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:	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(2) [Reserved]	
(3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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:	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>

NSPS Provision

Check if applicable

- | | |
|---|--------------------------|
| (1) If the total duration of excess emissions for the reporting period is less than one percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than five 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. | <input type="checkbox"/> |
| (2) If the total duration of excess emissions for the reporting period is one percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is five 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. | <input type="checkbox"/> |

Figure 1—SAMPLE 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: Total source operating time in reporting period 1

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

¹ For opacity, record all times in minutes. For gases, record all times in hours.

² For 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

NSPS Provision

Check if applicable

(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; | <input type="checkbox"/> |
| (ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the applicable standard; and | <input type="checkbox"/> |
| (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. | <input type="checkbox"/> |

NSPS Provision

Check if
applicable

(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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:	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(h) Individual subparts of this part may include specific provisions which clarify or make inapplicable the provisions set forth in this section.	<input checked="" type="checkbox"/>
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).	<input type="checkbox"/>
(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.	<input type="checkbox"/>

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(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(2) Safe sampling platform(s).	<input type="checkbox"/>
(3) Safe access to sampling platform(s).	<input type="checkbox"/>
(4) Utilities for sampling and testing equipment.	<input type="checkbox"/>
(f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>

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(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(g) The performance testing shall include a test method performance audit (PA) during the performance test. <i>(abridged – See rule for additional detail)</i>	<input type="checkbox"/>
(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. <i>(abridged – See rule for additional detail)</i>	<input type="checkbox"/>
(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:	<input type="checkbox"/>
(i) Preparing the sample;	<input type="checkbox"/>
(ii) Confirming the true concentration of the sample;	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(iv) Providing the opportunity for the compliance authority to comment on the selected concentration level for an audit sample;	<input type="checkbox"/>
(v) Distributing the sample to the user in a manner that guarantees that the true value of the sample is unknown to the user;	<input type="checkbox"/>
(vi) Recording the measured concentration reported by the user and determining if the measured value is within acceptable limits;	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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;	<input type="checkbox"/>

NSPS Provision	Check if applicable
(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.	<input type="checkbox"/>
(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:	<input type="checkbox"/>
(i) Checking audit samples to confirm their true value as reported by the AASP;	<input type="checkbox"/>
(ii) Performing technical systems audits of the AASP's facilities and operating procedures at least once every two years;	<input type="checkbox"/>
(iii) Providing standards for use by the voluntary consensus standard body to approve the accrediting body that will accredit the audit sample providers.	<input type="checkbox"/>
(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). <i>(abridged – See rule for additional detail)</i>	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
Section 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.)	<input checked="" type="checkbox"/>
Section 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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
Section 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.	<input checked="" type="checkbox"/>
(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).	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input checked="" type="checkbox"/>

NSPS Provision

Check if
applicable

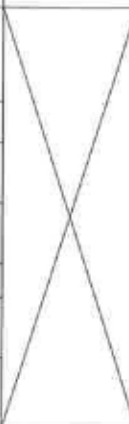

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| (e)(1) For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in § 60.8 unless one of the following conditions apply. If no performance test under § 60.8 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. <i>(abridged – See rule for additional detail)</i> | <input type="checkbox"/> |
| (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. | <input type="checkbox"/> |
| (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. | <input type="checkbox"/> |
| (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. | <input type="checkbox"/> |
| (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. | <input type="checkbox"/> |
| (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. | <input type="checkbox"/> |
| (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. | <input type="checkbox"/> |
| (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 . | <input type="checkbox"/> |
| (f) Special provisions set forth under an applicable subpart shall supersede any conflicting provisions in paragraphs (a) through (e) of this section. | <input type="checkbox"/> |

NSPS Provision	Check if applicable
(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.	<input type="checkbox"/>
Section 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.	<input checked="" type="checkbox"/>
Section 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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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, <i>(abridged – See rule for additional detail)</i>	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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. <i>(abridged – See rule for additional detail)</i>	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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:	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>

NSPS Provision	Check if applicable
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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:	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(iii) 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.	<input type="checkbox"/>
(iv) For each full or partial operating hour, all valid data points shall be used to calculate the hourly average.	<input type="checkbox"/>
(v) 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.	<input type="checkbox"/>
(vi) 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.	<input type="checkbox"/>
(vii) 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)).	<input type="checkbox"/>
(viii) 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 O ₂ or ng/J of pollutant).	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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:	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(2) Alternative monitoring requirements when the affected facility is infrequently operated.	<input type="checkbox"/>
(3) Alternative monitoring requirements to accommodate continuous monitoring systems that require additional measurements to correct for stack moisture conditions.	<input type="checkbox"/>
(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.	<input type="checkbox"/>

NSPS Provision	Check if applicable
(5) Alternative methods of converting pollutant concentration measurements to units of the standards.	<input type="checkbox"/>
(6) Alternative procedures for performing daily checks of zero and span drift that do not involve use of span gases or test cells.	<input type="checkbox"/>
(7) Alternatives to the A.S.T.M. test methods or sampling procedures specified by any subpart.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(j) An alternative to the relative accuracy (RA) test specified in Performance Specification 2 of appendix B may be requested as follows:	<input type="checkbox"/>
(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).	<input type="checkbox"/>
(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.	<input type="checkbox"/>
Section 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.	<input checked="" type="checkbox"/>
(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:	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>

NSPS Provision	Check if applicable
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(d) [Reserved]	
(e) The following shall not, by themselves, be considered modifications under this part:	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.	<input checked="" type="checkbox"/>
(3) An increase in the hours of operation.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(6) The relocation or change in ownership of an existing facility.	<input checked="" type="checkbox"/>
(f) Special provisions set forth under an applicable subpart of this part shall supersede any conflicting provisions of this section.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(2) This exemption shall not apply to any new unit that:	<input checked="" type="checkbox"/>
(i) Is designated as a replacement for an existing unit;	<input checked="" type="checkbox"/>
(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	<input checked="" type="checkbox"/>

NSPS Provision	Check if applicable
(k) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project is exempt from the requirements of this section. <i>(abridged – See rule for additional detail)</i>	<input checked="" type="checkbox"/>
(l) The reactivation of a very clean coal-fired electric utility steam generating unit is exempt from the requirements of this section.	<input checked="" type="checkbox"/>
Section 60.15 Reconstruction	
(a) An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate.	<input checked="" type="checkbox"/>
(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	<input checked="" type="checkbox"/>
(2) It is technologically and economically feasible to meet the applicable standards set forth in this part.	<input checked="" type="checkbox"/>
(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:	<input checked="" type="checkbox"/>
(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.	
Section 60.16 Priority list	
Section 60.17 Incorporations by reference	
Section 60.18 General control device and work practice requirements	
(a) <i>Introduction.</i> (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) <i>Flares.</i> Paragraphs (c) through (f) apply to flares.	<input type="checkbox"/>

NSPS Provision	Check if applicable
(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.	<input type="checkbox"/>
(2) Flares shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f).	<input type="checkbox"/>
(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.	<input type="checkbox"/>
<p>(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:</p> $V_{max} = (X_{H_2} - K_1) \cdot K_2$ <p>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).</p>	<input type="checkbox"/>
(B) The actual exit velocity of a flare shall be determined by the method specified in paragraph (f)(4) of this section.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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).	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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).	<input type="checkbox"/>
(6) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
<p>(3) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:</p> $H_T = K \sum_{i=1}^n C_i H_i$	<input type="checkbox"/>

NSPS Provision	Check if applicable
<p>Where:</p> <p>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;</p> $K = \text{Constant}, \frac{1}{1.740 \times 10^{-7}} \left(\frac{1}{\text{ppm}} \right) \left(\frac{\text{g mole}}{\text{scm}} \right) \left(\frac{\text{MJ}}{\text{kcal}} \right)$ <p>where the standard temperature for $\left(\frac{\text{g mole}}{\text{scm}} \right)$ is 20°C;</p> <p>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</p> <p>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.</p>	
<p>(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.</p>	<input type="checkbox"/>
<p>(5) The maximum permitted velocity, V_{max}, for flares complying with paragraph (c)(4)(iii) shall be determined by the following equation.</p> <p>$\text{Log}_{10}(V_{max}) = (H_T + 28.8) / 31.7$</p> <p>$V_{max}$ = Maximum permitted velocity, M/sec</p> <p>28.8 = Constant</p> <p>31.7 = Constant</p> <p>H_T = The net heating value as determined in paragraph (f)(3).</p>	<input type="checkbox"/>
<p>(6) The maximum permitted velocity, V_{max}, for air-assisted flares shall be determined by the following equation.</p> <p>$V_{max} = 8.706 + 0.7084 (H_T)$</p> <p>$V_{max}$ = Maximum permitted velocity, m/sec</p> <p>8.706 = Constant</p> <p>0.7084 = Constant</p> <p>H_T = The net heating value as determined in paragraph (f)(3).</p>	<input type="checkbox"/>
<p>(g) <i>Alternative work practice for monitoring equipment for leaks.</i> 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.</p>	<input type="checkbox"/>
<p>(1) <i>Applicable subpart</i> 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.</p>	
<p>(2) <i>Equipment</i> 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.</p>	
<p>(3) <i>Imaging</i> means making visible emissions that may otherwise be invisible to the naked eye.</p>	
<p>(4) <i>Optical gas imaging instrument</i> means an instrument that makes visible emissions that may otherwise be invisible to the naked eye.</p>	
<p>(5) <i>Repair</i> means that equipment is adjusted, or otherwise altered, in order to eliminate a leak.</p>	
<p>(6) <i>Leak</i> means:</p>	<input type="checkbox"/>
<p>(i) Any emissions imaged by the optical gas instrument;</p>	<input type="checkbox"/>
<p>(ii) Indications of liquids dripping;</p>	<input type="checkbox"/>

NSPS Provision	Check if applicable
(iii) Indications by a sensor that a seal or barrier fluid system has failed; or	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(4) The schedule for repair is as required in the applicable subpart.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(6) When this alternative work practice is used for detecting leaking equipment the following are not applicable for the equipment being monitored:	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(1) Instrument Specifications. The optical gas imaging instrument must comply with the requirements in (i)(1)(i) and (i)(1)(ii) of this section	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(ii) Provide a date and time stamp for video records of every monitoring event.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>
(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.	<input type="checkbox"/>

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Check if applicable

$$E_{dic} = (E_{sds}) \sum_{i=1}^k x_i$$

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.

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|---|--------------------------|
| (ii) Start the optical gas imaging instrument according to the manufacturer's instructions, ensuring that all appropriate settings conform to the manufacturer's instructions. | <input type="checkbox"/> |
| (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. | <input type="checkbox"/> |
| (iv) Establish a mass flow rate by using the following procedures: | <input type="checkbox"/> |
| (A) Provide a source of gas where it will be in the field of view of the optical gas imaging instrument. | <input type="checkbox"/> |
| (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. | <input type="checkbox"/> |
| (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. | <input type="checkbox"/> |
| (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. | <input type="checkbox"/> |
| (vi) To use an alternative method to demonstrate daily instrument checks, apply to the Administrator for approval of the alternative under § 60.13(i). | <input type="checkbox"/> |
| (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. | <input type="checkbox"/> |
| (4) Recordkeeping. You must keep the records described in paragraphs (i)(4)(i) through (i)(4)(vii) of this section: | <input type="checkbox"/> |
| (i) The equipment, processes, and facilities for which the owner or operator chooses to use the alternative work practice. | <input type="checkbox"/> |
| (ii) The detection sensitivity level selected from Table 1 to subpart A of this part for the optical gas imaging instrument. | <input type="checkbox"/> |
| (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. | <input type="checkbox"/> |
| (iv) The technical basis for the mass fraction of detectable chemicals used in the equation in paragraph (i)(2)(i)(B) of this section. | <input type="checkbox"/> |
| (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. | <input type="checkbox"/> |
| (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. | <input type="checkbox"/> |
| (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. | <input type="checkbox"/> |

NSPS Provision	Check if applicable
(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 .	<input type="checkbox"/>
Section 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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>
(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.	<input checked="" type="checkbox"/>

Table 1 to Subpart A to Part 60-Detection Sensitivity Levels (grams per hour)

Monitoring frequency per subpart ^a	Detection sensitivity level
Bi-Monthly	60
Semi-Quarterly	85
Monthly	100

^a When 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.

(abridged – See rule for additional detail)

1a) AQ Facility ID number: 08300007 1b) Agency Interest ID number: 1724
2) Facility Name: Magellan Pipeline Co LP-Marshall Terminal

Title 40 - Protection of Environment

Chapter I - Environmental Protection Agency

Subchapter C - Air Programs

Part 60 - Standards of Performance for New Stationary Sources

Authority: 42 U.S.C. 7401 et seq. 42 U.S.C. 7401-7601.

Source: 36 FR 24877, Dec. 23, 1971, unless otherwise noted.

Subpart Kb Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

§ 60.110b Applicability and designation of affected facility.

§ 60.111b Definitions.

§ 60.112b Standard for volatile organic compounds (VOC).

§ 60.113b Testing and procedures.

§ 60.114b Alternative means of emission limitation.

§ 60.115b Reporting and recordkeeping requirements.

§ 60.116b Monitoring of operations.

§ 60.117b Delegation of authority.

Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984

Source: 52 FR 11429, Apr. 8, 1987, unless otherwise noted.

§ 60.110b Applicability and designation of affected facility.

- (a) Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters (m³) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.
- (b) This subpart does not apply to storage vessels with a capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure less than 15.0 kPa.
- (c) [Reserved]
- (d) This subpart does not apply to the following:
 - (1) Vessels at coke oven by-product plants.

- (2) Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere.
- (3) Vessels permanently attached to mobile vehicles such as trucks, railcars, barges, or ships.
- (4) Vessels with a design capacity less than or equal to 1,589.874 m³ used for petroleum or condensate stored, processed, or treated prior to custody transfer.
- (5) Vessels located at bulk gasoline plants.
- (6) Storage vessels located at gasoline service stations.
- (7) Vessels used to store beverage alcohol.
- (8) Vessels subject to subpart GGGG of 40 CFR part 63.

(e) *Alternative means of compliance -*

- (1) **Option to comply with part 65.** Owners or operators may choose to comply with 40 CFR part 65, subpart C, to satisfy the requirements of §§ 60.112b through 60.117b for storage vessels that are subject to this subpart that meet the specifications in paragraphs (e)(1)(i) and (ii) of this section. When choosing to comply with 40 CFR part 65, subpart C, the monitoring requirements of § 60.116b(c), (e), (f)(1), and (g) still apply. Other provisions applying to owners or operators who choose to comply with 40 CFR part 65 are provided in 40 CFR 65.1.
 - (i) A storage vessel with a design capacity greater than or equal to 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa; or
 - (ii) A storage vessel with a design capacity greater than 75 m³ but less than 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa.
- (2) **Part 60, subpart A.** Owners or operators who choose to comply with 40 CFR part 65, subpart C, must also comply with §§ 60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for those storage vessels. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2) do not apply to owners or operators of storage vessels complying with 40 CFR part 65, subpart C, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart C, must comply with 40 CFR part 65, subpart A.
- (3) **Internal floating roof report.** If an owner or operator installs an internal floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.43. This report shall be an attachment to the notification required by 40 CFR 65.5(b).
- (4) **External floating roof report.** If an owner or operator installs an external floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.44. This report shall be an attachment to the notification required by 40 CFR 65.5(b).
- (5) **Option to comply with part 63, subpart WW, of this chapter.** Except as specified in paragraphs (e)(5)(i) through (iv) of this section, owners or operators may choose to comply with 40 CFR part 63, subpart WW, to satisfy the requirements of §§ 60.112b through 60.117b for storage vessels either with a design capacity greater than or equal to 151 m³ containing a VOL that, as stored, has a maximum

true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa, or with a design capacity greater than or equal to 75 m³ but less than 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa.

- (i) The general provisions in subpart A of this part apply instead of the general provisions in subpart A of part 63 of this chapter.
- (ii) Where terms are defined in both this subpart and 40 CFR part 63, subpart WW, the definitions in this subpart apply.
- (iii) Owners or operators who choose to comply with 40 CFR part 63, subpart WW, also must comply with the monitoring requirements of § 60.116b(a), (c), (e), and (f)(1), except as specified in paragraphs (e)(5)(iii)(A) through (C) of this section.
 - (A) The reference to all records applies only to the records required by § 60.116b(c);
 - (B) The reference to § 60.116b(b) does not apply; and
 - (C) The reference to § 60.116b(g) does not apply.
- (iv) Owners or operators who choose to comply with 40 CFR part 63, subpart WW, must also keep records and furnish reports as specified in paragraphs (e)(5)(iv)(A) through (F) of this section.
 - (A) For each affected facility, the owner or operator must notify the Administrator at least 30 days before the first inspection is conducted under 40 CFR part 63, subpart WW. After this notification is submitted to the Administrator, the owner or operator must continue to comply with the alternative standard described in this paragraph (e)(5) until the owner or operator submits another notification to the Administrator indicating the affected facility is using the requirements of §§ 60.112b through 60.117b instead of the alternative standard described in this paragraph (e)(5). The compliance schedule for events does not reset upon switching between compliance with this subpart and 40 CFR part 63, subpart WW.
 - (B) Keep a record of each affected facility using the alternative standard described in this paragraph (e)(5) when conducting an inspection required by § 63.1063(c)(1) of this chapter.
 - (C) Keep a record of each affected facility using the alternative standard described in this paragraph (e)(5) when conducting an inspection required by § 63.1063(c)(2) of this chapter.
 - (D) Copies of all records and reports kept pursuant to § 60.115b(a) and (b) that have not met the 2-year record retention required by the introductory text of § 60.115b must be kept for an additional 2 years after the date of submittal of the inspection notification specified in paragraph (e)(5)(iv)(A) of this section, indicating the affected facility is using the requirements of 40 CFR part 63, subpart WW.
 - (E) Copies of all records and reports kept pursuant to § 63.1065 of this chapter that have not met the 5-year record retention required by the introductory text of § 63.1065 must be kept for an additional 5 years after the date of submittal of the notification specified in paragraph (e)(5)(iv)(A) of this section, indicating the affected facility is using the requirements of §§ 60.112b through 60.117b.
 - (F) The following exceptions to the reporting requirements of § 63.1066 of this chapter apply:

- (1) The notification of initial startup required under § 63.1066(a)(1) and (2) of this chapter must be submitted as an attachment to the notification required by §§ 60.7(a)(3) and 60.115b(a)(1);
- (2) The reference in § 63.1066(b)(2) of this chapter to periodic reports "when inspection failures occur" means to submit inspections results within 60 days of the initial gap measurements required by § 63.1063(c)(2)(i) of this chapter and within 30 days of all other inspections required by § 63.1063(c)(1) and (2) of this chapter.

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 78275, Dec. 14, 2000; 68 FR 59332, Oct. 15, 2003; 86 FR 5019, Jan. 19, 2021]

§ 60.111b Definitions.

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this subpart as follows:

Bulk gasoline plant means any gasoline distribution facility that has a gasoline throughput less than or equal to 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal requirement or Federal, State or local law, and discoverable by the Administrator and any other person.

Condensate means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

Custody transfer means the transfer of produced petroleum and/or condensate, after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation.

Fill means the introduction of VOL into a storage vessel but not necessarily to complete capacity.

Gasoline service station means any site where gasoline is dispensed to motor vehicle fuel tanks from stationary storage tanks.

Maximum true vapor pressure means the equilibrium partial pressure exerted by the volatile organic compounds (as defined in 40 CFR 51.100) in the stored VOL at the temperature equal to the highest calendar-month average of the VOL storage temperature for VOL's stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for VOL's stored at the ambient temperature, as determined:

- (1) In accordance with methods described in American Petroleum institute Bulletin 2517, Evaporation Loss From External Floating Roof Tanks, (incorporated by reference - see § 60.17); or
- (2) As obtained from standard reference texts; or
- (3) As determined by ASTM D2879-83, 96, or 97 (incorporated by reference - see § 60.17);
- (4) Any other method approved by the Administrator.

Petroleum means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

Petroleum liquids means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery.

Process tank means a tank that is used within a process (including a solvent or raw material recovery process) to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations.

Reid vapor pressure means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquified petroleum gases, as determined by ASTM D323-82 or 94 (incorporated by reference - see § 60.17).

Storage vessel means each tank, reservoir, or container used for the storage of volatile organic liquids but does not include:

- (1) Frames, housing, auxiliary supports, or other components that are not directly involved in the containment of liquids or vapors;
- (2) Subsurface caverns or porous rock reservoirs; or
- (3) Process tanks.

Volatile organic liquid (VOL) means any organic liquid which can emit volatile organic compounds (as defined in 40 CFR 51.100) into the atmosphere.

Waste means any liquid resulting from industrial, commercial, mining or agricultural operations, or from community activities that is discarded or is being accumulated, stored, or physically, chemically, or biologically treated prior to being discarded or recycled.

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989; 65 FR 61756, Oct. 17, 2000; 68 FR 59333, Oct. 15, 2003]

§ 60.112b Standard for volatile organic compounds (VOC).

- (a) The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:
 - (1) A fixed roof in combination with an internal floating roof meeting the following specifications:
 - (i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.
 - (ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:
 - (A) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

- (B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.
 - (C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.
- (iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.
 - (iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.
 - (v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.
 - (vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.
 - (vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.
 - (viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.
 - (ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.
- (2) An external floating roof. An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:
- (i) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.
 - (A) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in § 60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.
 - (B) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in § 60.113b(b)(4).

- (ii) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.
 - (iii) The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.
- (3) A closed vent system and control device meeting the following specifications:
 - (i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, § 60.485(b).
 - (ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§ 60.18) of the General Provisions.
- (4) A system equivalent to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in § 60.114b of this subpart.
- (b) The owner or operator of each storage vessel with a design capacity greater than or equal to 75 m³ which contains a VOL that, as stored, has a maximum true vapor pressure greater than or equal to 76.6 kPa shall equip each storage vessel with one of the following:
 - (1) A closed vent system and control device as specified in § 60.112b(a)(3).
 - (2) A system equivalent to that described in paragraph (b)(1) as provided in § 60.114b of this subpart.
- (c) **Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia.** 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").
 - (1) For any storage vessel that otherwise would be subject to the control technology requirements of paragraphs (a) or (b) of this section, the site shall have the option of either complying directly with the requirements of this subpart, or reducing the site-wide total criteria pollutant emissions cap (total emissions cap) 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 total emissions cap 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 subpart for such storage vessel.
 - (2) For any storage vessel at the site not subject to the requirements of 40 CFR 60.112b (a) or (b), the requirements of 40 CFR 60.116b (b) and (c) and the General Provisions (subpart A of this part) shall not apply.

[52 FR 11429, Apr. 8, 1987, as amended at 62 FR 52641, Oct. 8, 1997]

§ 60.113b Testing and procedures.

The owner or operator of each storage vessel as specified in § 60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of § 60.112b.

- (a) After installing the control equipment required to meet § 60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:
 - (1) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.
 - (2) For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in § 60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.
 - (3) For vessels equipped with a double-seal system as specified in § 60.112b(a)(1)(ii)(B):
 - (i) Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or
 - (ii) Visually inspect the vessel as specified in paragraph (a)(2) of this section.
 - (4) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs (a)(2) and (a)(3)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph (a)(3)(i) of this section.
 - (5) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (a)(1) and (a)(4) of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the owner or operator could not have known about the

inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

- (b) After installing the control equipment required to meet § 60.112b(a)(2) (external floating roof), the owner or operator shall:
- (1) Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency.
 - (i) Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.
 - (ii) Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.
 - (iii) If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of paragraphs (b)(1)(i) and (b)(1)(ii) of this section.
 - (2) Determine gap widths and areas in the primary and secondary seals individually by the following procedures:
 - (i) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.
 - (ii) Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.
 - (iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.
 - (3) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (b)(4) of this section.
 - (4) Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in (b)(4) (i) and (ii) of this section:
 - (i) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed 212 cm² per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.
 - (A) One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.

- (B) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.
- (ii) The secondary seal is to meet the following requirements:
 - (A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section.
 - (B) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed 21.2 cm² per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.
 - (C) There are to be no holes, tears, or other openings in the seal or seal fabric.
- (iii) If a failure that is detected during inspections required in paragraph (b)(1) of § 60.113b(b) cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in § 60.115b(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.
- (5) Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.
- (6) Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.
 - (i) If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.
 - (ii) For all the inspections required by paragraph (b)(6) of this section, the owner or operator shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph (b)(6) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.
- (c) The owner or operator of each source that is equipped with a closed vent system and control device as required in § 60.112b (a)(3) or (b)(2) (other than a flare) is exempt from § 60.8 of the General Provisions and shall meet the following requirements.
 - (1) Submit for approval by the Administrator as an attachment to the notification required by § 60.7(a)(1) or, if the facility is exempt from § 60.7(a)(1), as an attachment to the notification required by § 60.7(a)(2), an operating plan containing the information listed below.
 - (i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under

varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

- (ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).
- (2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.
- (d) The owner or operator of each source that is equipped with a closed vent system and a flare to meet the requirements in § 60.112b (a)(3) or (b)(2) shall meet the requirements as specified in the general control device requirements, § 60.18 (e) and (f).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989]

§ 60.114b Alternative means of emission limitation.

- (a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by any requirement in § 60.112b, the Administrator will publish in the FEDERAL REGISTER a notice permitting the use of the alternative means for purposes of compliance with that requirement.
- (b) Any notice under paragraph (a) of this section will be published only after notice and an opportunity for a hearing.
- (c) Any person seeking permission under this section shall submit to the Administrator a written application including:
 - (1) An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure.
 - (2) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.
- (d) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as specified in § 60.112b.

§ 60.115b Reporting and recordkeeping requirements.

The owner or operator of each storage vessel as specified in § 60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of § 60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment.

- (a) After installing control equipment in accordance with § 60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.
 - (1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of § 60.112b(a)(1) and § 60.113b(a)(1). This report shall be an attachment to the notification required by § 60.7(a)(3).
 - (2) Keep a record of each inspection performed as required by § 60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).
 - (3) If any of the conditions described in § 60.113b(a)(2) are detected during the annual visual inspection required by § 60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.
 - (4) After each inspection required by § 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in § 60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of § 60.112b(a)(1) or § 60.113b(a)(3) and list each repair made.
- (b) After installing control equipment in accordance with § 60.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.
 - (1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of § 60.112b(a)(2) and § 60.113b(b)(2), (b)(3), and (b)(4). This report shall be an attachment to the notification required by § 60.7(a)(3).
 - (2) Within 60 days of performing the seal gap measurements required by § 60.113b(b)(1), furnish the Administrator with a report that contains:
 - (i) The date of measurement.
 - (ii) The raw data obtained in the measurement.
 - (iii) The calculations described in § 60.113b (b)(2) and (b)(3).
 - (3) Keep a record of each gap measurement performed as required by § 60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:
 - (i) The date of measurement.
 - (ii) The raw data obtained in the measurement.
 - (iii) The calculations described in § 60.113b (b)(2) and (b)(3).

- (4) After each seal gap measurement that detects gaps exceeding the limitations specified by § 60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in paragraph (b)(2) of this section and the date the vessel was emptied or the repairs made and date of repair.
- (c) After installing control equipment in accordance with § 60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.
 - (1) A copy of the operating plan.
 - (2) A record of the measured values of the parameters monitored in accordance with § 60.113b(c)(2).
- (d) After installing a closed vent system and flare to comply with § 60.112b, the owner or operator shall meet the following requirements.
 - (1) A report containing the measurements required by § 60.18(f) (1), (2), (3), (4), (5), and (6) shall be furnished to the Administrator as required by § 60.8 of the General Provisions. This report shall be submitted within 6 months of the initial start-up date.
 - (2) Records shall be kept of all periods of operation during which the flare pilot flame is absent.
 - (3) Semiannual reports of all periods recorded under § 60.115b(d)(2) in which the pilot flame was absent shall be furnished to the Administrator.

[52 FR 11429, Apr. 8, 1987, as amended at 86 FR 5019, Jan. 19, 2021]

§ 60.116b Monitoring of operations.

- (a) The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source.
- (b) The owner or operator of each storage vessel as specified in § 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.
- (c) Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.
- (d) Except as provided in paragraph (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.
- (e) Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.

- (1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.
- (2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:
 - (i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference - see § 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).
 - (ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.
- (3) For other liquids, the vapor pressure:
 - (i) May be obtained from standard reference texts, or
 - (ii) Determined by ASTM D2879-83, 96, or 97 (incorporated by reference - see § 60.17); or
 - (iii) Measured by an appropriate method approved by the Administrator; or
 - (iv) Calculated by an appropriate method approved by the Administrator.
- (f) The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements:
 - (1) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of this section.
 - (2) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in § 60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:
 - (i) ASTM D2879-83, 96, or 97 (incorporated by reference - see § 60.17); or
 - (ii) ASTM D323-82 or 94 (incorporated by reference - see § 60.17); or
 - (iii) As measured by an appropriate method as approved by the Administrator.
- (g) The owner or operator of each vessel equipped with a closed vent system and control device meeting the specification of § 60.112b or with emissions reductions equipment as specified in 40 CFR 65.42(b)(4), (b)(5), (b)(6), or (c) is exempt from the requirements of paragraphs (c) and (d) of this section.

[52 FR 11429, Apr. 8, 1987, as amended at 65 FR 61756, Oct. 17, 2000; 65 FR 78276, Dec. 14, 2000; 68 FR 59333, Oct. 15, 2003]

§ 60.117b Delegation of authority.

- (a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.
- (b) Authorities which will not be delegated to States: §§ 60.111b(f)(4), 60.114b, 60.116b(e)(3)(iii), 60.116b(e)(3)(iv), and 60.116b(f)(2)(iii).

[52 FR 11429, Apr. 8, 1987, as amended at 52 FR 22780, June 16, 1987]

TABLE E
CLASS I OZONE DEPLETING CHEMICALS

Group I:	Chemical CFCl ₃ -Trichlorofluoromethane (CFC-11) CF ₂ Cl ₂ -Dichlorodifluoromethane (CFC-12) C ₂ F ₃ Cl ₂ -Trichlorotrifluoroethane (CFC-113) C ₂ F ₄ Cl ₃ -Dichlorotetrafluoroethane (CFC-114) C ₂ F ₅ Cl-Monochloropentafluoroethane (CFC-115) All isomers of the above chemicals	CAS Number 75-69-4 75-71-8 76-13-1 76-14-2 76-15-3
Group II:	Chemical CF ₂ ClBr-Bromochlorodifluoromethane (Halon-1211) CF ₃ Br-Bromotrifluoroethane (Halon-1301) C ₂ F ₄ Br ₂ -Dibromotetrafluoroethane (Halon-2402) All isomers of the above chemicals	CAS Number 421-01-2 75-63-8 124-73-2
Group III:	Chemical CF ₃ Cl-Chlorotrifluoromethane (CFC-13) C ₂ FCl ₅ (CFC-111) C ₂ F ₂ Cl ₄ (CFC-112) C ₃ FCl ₇ (CFC-211) C ₃ F ₂ Cl ₆ (CFC-212) C ₃ F ₃ Cl ₅ (CFC-213) C ₃ F ₄ Cl ₄ (CFC-214) C ₃ F ₅ Cl ₃ (CFC-215) C ₃ F ₆ Cl ₂ (CFC-216) C ₃ F ₇ Cl (CFC-217) All isomers of the above chemicals	CAS Number 75-72-9 954-56-3 76-12-0 422-78-6 3182-26-1 2354-06-5 29255-31-0 4259-43-2 661-97-2 422-86-6
Group IV:	Chemical CCl ₄ -Carbon Tetrachloride	CAS Number 56-23-5
Group V:	Chemical C ₂ H ₃ Cl ₃ -1,1,1 Trichloroethane (Methyl chloroform) All isomers of the above chemical except 1,1,2-trichloroethane	CAS Number 71-55-6 79-00-5
Group VI:	Chemical CH ₃ Br - Bromomethane (Methyl Bromide)	CAS Number
Group VII:	Chemical CHFBr ₂ CHF ₂ Br (HBFC-22B1) CH ₂ FBr C ₂ HFBr ₄ C ₂ HF ₂ Br ₃ C ₂ HF ₃ Br ₂ C ₂ HF ₄ Br C ₂ H ₂ FBr ₃ C ₂ H ₂ F ₂ Br ₂ C ₂ H ₂ F ₃ Br C ₂ H ₂ FBr ₂ C ₂ H ₃ F ₂ Br C ₂ H ₄ FBr C ₃ HFBr ₆ C ₃ HF ₂ Br ₅	CAS Number

TABLE E (continued)

Group VII:	Chemical	CAS Number
	C ₃ HF ₃ Br ₄	
	C ₃ HF ₄ Br ₃	
	C ₃ HF ₅ Br ₂	
	C ₃ HF ₆ Br	
	C ₃ H ₂ FBR ₅	
	C ₃ H ₂ F ₂ BR ₄	
	C ₃ H ₂ F ₃ Br ₃	
	C ₃ H ₂ F ₄ Br ₂	
	C ₃ H ₂ F ₅ BR	
	C ₃ H ₃ FBR ₄	
	C ₃ H ₃ F ₂ Br ₃	
	C ₃ H ₃ F ₃ Br ₂	
	C ₃ H ₃ F ₄ Br	
	C ₃ H ₄ FBr ₃	
	C ₃ H ₄ F ₂ Br ₂	
	C ₃ H ₄ F ₃ Br	
	C ₃ H ₅ FBr ₂	
	C ₃ H ₅ F ₂ Br	
	C ₃ H ₆ FB	

TABLE F
CLASS II OZONE DEPLETING CHEMICALS

	Chemical	CAS Number
HCFC-21	CH ₂ FC1 ₂ -dichlorofluoromethane	75-43-4
HCFC-22	CHF ₂ Cl -chlorodifluoromethane	75-45-6
HCFC-31	CH ₂ FC1 -chlorofluoromethane	593-70-4
HCFC-121	C ₂ HFCl ₄ -tetrachlorofluoroethane	130879-71-9
HCFC-121	C ₂ HFCl ₄ -tetrachlorofluoroethane	134237-32-4
HCFC-121	C ₂ HFCl ₄ -1,1,1,2-tetrachloro-2-fluoroethane	354-11-0
HCFC-121	C ₂ HFCl ₄ -1,1,2,2-tetrachloro-1-fluoroethane	354-14-3
HCFC-122	C ₂ HF ₂ Cl ₃ -trichlorodifluoroethane	41834-16-6
HCFC-122	C ₂ HF ₂ Cl ₃ -trichloro-1,1-difluoroethane	55949-46-7
HCFC-122	C ₂ HF ₂ Cl ₃ -1,2,2-trichloro-1,1-difluoroethane	354-21-2
HCFC-122	C ₂ HF ₂ Cl ₃ -1,2,2-trichloro-1,2-difluoroethane	354-15-4
HCFC-122	C ₂ HF ₂ Cl ₃ -1,1,1-trichloro-2,2-difluoroethane	354-12-1
HCFC-122	C ₂ HF ₂ Cl ₃ -1,1,2-trichloro-2,2-difluoroethane	NA
HCFC-123	C ₂ HF ₃ Cl ₂ -dichlorotrifluoroethane	34077-87-7
HCFC-123	C ₂ HF ₃ Cl ₂ -dichlorotrifluoroethane	134237-33-5
HCFC-123	C ₂ HF ₃ Cl ₂ -dichloro-1,1,2-trifluoroethane	90454-18-5
HCFC-123	C ₂ HF ₃ Cl ₂ -2,2-dichloro-1,1,1-trifluoroethane	306-83-2
HCFC-123a	C ₂ HF ₃ Cl ₂ -1,2-dichloro-1,1,2-trifluoroethane	354-23-4
HCFC-123b	C ₂ HF ₃ Cl ₂ -1,1-dichloro-1,2,2-trifluoroethane	812-04-4
HCFC-123	C ₂ HF ₃ Cl ₂ -2,2-dichloro-1,1,2-trifluoroethane	NA
HCFC-124	C ₂ HF ₄ Cl -chlorotetrafluoroethane	63938-10-3
HCFC-124	C ₂ HF ₄ Cl -2-chloro-1,1,1,2-tetrafluoroethane	2837-89-0
HCFC-124	C ₂ HF ₄ Cl -1-chloro-1,1,2,2-tetrafluoroethane	354-25-6
HCFC-131	C ₂ H ₂ FC1 ₃ -trichlorofluoroethane	27154-33-2
HCFC-131	C ₂ H ₂ FC1 ₃ -trichlorofluoroethane	134237-34-6
HCFC-131	C ₂ H ₂ FC1 ₃ -1,1,2-trichloro-1 (or 2)-fluoroethane	90134-98-8
HCFC-131b	C ₂ H ₂ FC1 ₃ -1,1,1-trichloro-2-fluoroethane	2366-36-1
HCFC-131a	C ₂ H ₂ FC1 ₃ -1,1,2-trichloro-1-fluoroethane	811-95-0
HCFC-131	C ₂ H ₂ FC1 ₃ -1,1,2-trichloro-2-fluoroethane	359-28-4
HCFC-132	C ₂ H ₂ F ₂ Cl ₂ -dichlorodifluoroethane	25915-78-0
HCFC-132	C ₂ H ₂ F ₂ Cl ₂ -dichloro-1,1-difluoroethane	55494-45-6
HCFC-132	C ₂ H ₂ F ₂ Cl ₂ -1,1-dichlorodifluoroethane	31153-51-2
HCFC-132	C ₂ H ₂ F ₂ Cl ₂ -1,2-dichloro-1,2-difluoroethane	33579-37-2
HCFC-132	C ₂ H ₂ F ₂ Cl ₂ -1,2-dichloro-1,2-difluoroethane	33489-30-4
HCFC-132c	C ₂ H ₂ F ₂ Cl ₂ -1,1-dichloro-1,2-difluoroethane	1842-05-3
HCFC-132b	C ₂ H ₂ F ₂ Cl ₂ -1,2-dichloro-1,1-difluoroethane	1649-08-7
HCFC-132a	C ₂ H ₂ F ₂ Cl ₂ -1,1-dichloro-2,2-difluoroethane	471-43-2
HCFC-132	C ₂ H ₂ F ₂ Cl ₂ -1,2-dichloro-1,2-difluoroethane	431-06-1
HCFC-133	C ₂ H ₂ F ₃ Cl -chlorotrifluoroethane	13330-45-6
HCFC-133	C ₂ H ₂ F ₃ Cl -1-chloro-1,2,2-trifluoroethane	431-07-2
HCFC-133b	C ₂ H ₂ F ₃ Cl -1-chloro-1,1,2-trifluoroethane	421-04-5
HCFC-133a	C ₂ H ₂ F ₃ Cl -2-chloro-1,1,1-trifluoroethane	75-88-7
HCFC-141	C ₂ H ₃ FC1 ₂ -dichlorofluoroethane	25167-88-8
HCFC-141b	C ₂ H ₃ FC1 ₂ -1,1-dichloro-1-fluoroethane	1717-00-6
HCFC-141	C ₂ H ₃ FC1 ₂ -1,2-dichloro-1-fluoroethane	430-57-9
HCFC-141a	C ₂ H ₃ FC1 ₂ -1,1-dichloro-2-fluoroethane	430-53-5
HCFC-142	C ₂ H ₃ F ₂ Cl -chlorodifluoroethane	25497-29-4
HCFC-142	C ₂ H ₃ F ₂ Cl -chloro-1,1-difluoroethane	55949-44-5
HCFC-142a	C ₂ H ₃ F ₂ Cl -2-chloro-1,1-difluoroethane	338-65-8
HCFC-142b	C ₂ H ₃ F ₂ Cl -1-chloro-1,2-difluoroethane	338-64-7
HCFC-142	C ₂ H ₃ F ₂ Cl -1-chloro-1,1-difluoroethane	75-68-3
HCFC-221	C ₃ HFCl ₆ -hexachlorofluoropropane	29470-94-8

TABLE F (continued)

	Chemical	CAS Number
HCFC-221	C ₃ HFCl ₆ -hexachlorofluoropropane	134237-35-7
HCFC-221	C ₃ HFCl ₆ -1,1,1,2,3,3-hexachloro-3-fluoropropane	431-79-8
HCFC-221	C ₃ HFCl ₆ -1,1,1,2,3,3-hexachloro-2-fluoropropane	422-40-2
HCFC-221	C ₃ HFCl ₆ -1,1,1,2,2,3-hexachloro-1-fluoropropane	422-26-4
HCFC-221	C ₃ HFCl ₆ -1,1,2,2,3,3-hexachloro-1-fluoropropane	422-28-6
HCFC-221	C ₃ HFCl ₆ -1,1,1,3,3,3-hexachloro-2-fluoropropane	NA
HCFC-222	C ₃ HF ₂ Cl ₅ -pentachlorodifluoropropane	116867-32-4
HCFC-222	C ₃ HF ₂ Cl ₅ -pentachlorodifluoropropane	134237-36-8
HCFC-222	C ₃ HF ₂ Cl ₅ -1,1,2,3,3-pentachloro-1,3-difluoropropane	421-82-3
HCFC-222	C ₃ HF ₂ Cl ₅ -1,1,1,2,3-pentachloro-3,3-difluoropropane	431-80-1
HCFC-222c	C ₃ HF ₂ Cl ₅ -1,1,1,3,3-pentachloro-2,2-difluoropropane	422-49-1
HCFC-222	C ₃ HF ₂ Cl ₅ -1,2,2,3,3-pentachloro-1,1-difluoropropane	422-30-0
HCFC-222	C ₃ HF ₂ Cl ₅ -1,1,1,2,2-pentachloro-3,3-difluoropropane	422-27-5
HCFC-222	C ₃ HF ₂ Cl ₅ -1,1,1,2,3-pentachloro-2,3-difluoropropane	NA
HCFC-222	C ₃ HF ₂ Cl ₅ -1,1,1,3,3-pentachloro-2,3-difluoropropane	NA
HCFC-222	C ₃ HF ₂ Cl ₅ -1,1,2,2,3-pentachloro-1,3-difluoropropane	NA
HCFC-222	C ₃ HF ₂ Cl ₅ -1,1,2,3,3-pentachloro-1,2-difluoropropane	NA
HCFC-223	C ₃ HF ₃ Cl ₄ -tetrachlorotrifluoropropane	29470-95-9
HCFC-223	C ₃ HF ₃ Cl ₄ -tetrachlorotrifluoropropane	134237-37-9
HCFC-223	C ₃ HF ₃ Cl ₄ -1,1,1,3-tetrachloro-2,3,3-trifluoropropane	54002-59-4
HCFC-223	C ₃ HF ₃ Cl ₄ -1,1,2,3-tetrachloro-1,3,3-trifluoropropane	431-83-4
HCFC-223	C ₃ HF ₃ Cl ₄ -1,1,1,2-tetrachloro-3,3,3-trifluoropropane	431-81-2
HCFC-223ca	C ₃ HF ₃ Cl ₄ -1,1,3,3-tetrachloro-1,2,2-trifluoropropane	422-52-6
HCFC-223cb	C ₃ HF ₃ Cl ₄ -1,1,1,3-tetrachloro-2,2,3-trifluoropropane	422-50-4
HCFC-223	C ₃ HF ₃ Cl ₄ -1,2,3,3-tetrachloro-1,1,2-trifluoropropane	422-41-3
HCFC-223	C ₃ HF ₃ Cl ₄ -2,2,3,3-tetrachloro-1,1,1-trifluoropropane	422-35-5
HCFC-223	C ₃ HF ₃ Cl ₄ -1,1,2,2-tetrachloro-1,3,3-trifluoropropane	422-29-7
HCFC-223	C ₃ HF ₃ Cl ₄ -1,1,1,2-tetrachloro-2,3,3-trifluoropropane	NA
HCFC-223	C ₃ HF ₃ Cl ₄ -1,1,3,3-tetrachloro-1,2,3-trifluoropropane	NA
HCFC-223	C ₃ HF ₃ Cl ₄ -1,2,2,3-tetrachloro-1,1,3-trifluoropropane	NA
HCFC-223	C ₃ HF ₃ Cl ₄ -1,1,2,3-tetrachloro-1,2,3-trifluoropropane	NA
HCFC-224	C ₃ HF ₄ Cl ₃ -trichlorotetrafluoropropane	127564-91-4
HCFC-224	C ₃ HF ₄ Cl ₃ -trichlorotetrafluoropropane	134237-38-0
HCFC-224	C ₃ HF ₄ Cl ₃ -1,1,3-trichloro-1,2,3,3-tetrafluoropropane	53063-53-9
HCFC-224	C ₃ HF ₄ Cl ₃ -1,1,1-trichloro-2,3,3,3-tetrafluoropropane	53063-52-8
HCFC-224	C ₃ HF ₄ Cl ₃ -1,2,3-trichloro-1,1,3,3-tetrafluoropropane	431-85-6
HCFC-224	C ₃ HF ₄ Cl ₃ -1,1,2-trichloro-1,3,3,3-tetrafluoropropane	431-84-5
HCFC-224ca	C ₃ HF ₄ Cl ₃ -1,3,3-trichloro-1,1,2,2-tetrafluoropropane	422-54-8
HCFC-224cb	C ₃ HF ₄ Cl ₃ -1,1,3-trichloro-1,2,2,3-tetrafluoropropane	422-53-7
HCFC-224cc	C ₃ HF ₄ Cl ₃ -1,1,1-trichloro-2,2,3,3-tetrafluoropropane	422-51-5
HCFC-224	C ₃ HF ₄ Cl ₃ -2,3,3-trichloro-1,1,1,2-tetrafluoropropane	422-47-9
HCFC-224	C ₃ HF ₄ Cl ₃ -1,2,3-trichloro-1,1,2,3-tetrafluoropropane	422-42-4
HCFC-224	C ₃ HF ₄ Cl ₃ -1,2,2-trichloro-1,1,3,3-tetrafluoropropane	422-32-2
HCFC-224	C ₃ HF ₄ Cl ₃ -2,2,3-trichloro-1,1,1,3-tetrafluoropropane	NA
HCFC-224	C ₃ HF ₄ Cl ₃ -1,1,2-trichloro-1,2,3,3-tetrafluoropropane	NA
HCFC-225	C ₃ HF ₅ Cl ₂ -dichloropentafluoropropane	127564-92-5
HCFC-225	C ₃ HF ₅ Cl ₂ -1,3-dichloro-1,1,2,3,3-pentafluoropropane	136013-79-1
HCFC-225aa	C ₃ HF ₅ Cl ₂ -2,2-dichloro-1,1,1,3,3-pentafluoropropane	128903-21-9
HCFC-225	C ₃ HF ₅ Cl ₂ -1,1-dichloro-1,2,3,3,3-pentafluoropropane	111512-56-2
HCFC-225	C ₃ HF ₅ Cl ₂ -2,3-dichloro-1,1,1,2,3-pentafluoropropane	111512-55-1
HCFC-225	C ₃ HF ₅ Cl ₂ -2,3-dichloro-1,1,1,2,3-pentafluoropropane	111512-51-7
HCFC-225cc	C ₃ HF ₅ Cl ₂ -1,1-dichloro-1,2,2,3,3-pentafluoropropane	13474-88-9
HCFC-225cb	C ₃ HF ₅ Cl ₂ -1,3-dichloro-1,1,2,2,3-pentafluoropropane	507-55-1

TABLE F (continued)

	Chemical	CAS Number
HCFC-225da	C ₃ H ₂ F ₅ Cl ₂ -1,2-dichloro-1,1,3,3,3-pentafluoropropane	431-86-7
HCFC-225ca	C ₃ H ₂ F ₅ Cl ₂ -3,3-dichloro-1,1,1,2,2-pentafluoropropane	422-56-0
HCFC-225ba	C ₃ H ₂ F ₅ Cl ₂ -2,3-dichloro-1,1,1,2,3-pentafluoropropane	422-48-0
HCFC-225	C ₃ H ₂ F ₅ Cl ₂ -1,2-dichloro-1,1,2,3,3-pentafluoropropane	422-44-6
HCFC-226	C ₃ H ₂ F ₆ Cl -chlorohexafluoropropane	28987-04-4
HCFC-226	C ₃ H ₂ F ₆ Cl -chlorohexafluoropropane	134308-72-8
HCFC-226ba	C ₃ H ₂ F ₆ Cl -2-chloro-1,1,1,2,3,3-hexafluoropropane	51346-64-6
HCFC-226da	C ₃ H ₂ F ₆ Cl -2-chloro-1,1,1,3,3,3-hexafluoropropane	431-87-8
HCFC-226ca	C ₃ H ₂ F ₆ Cl -3-chloro-1,1,1,2,2,3-hexafluoropropane	422-57-1
HCFC-226cb	C ₃ H ₂ F ₆ Cl -1-chloro-1,1,2,2,3,3-hexafluoropropane	422-55-9
HCFC-226ea	C ₃ H ₂ F ₆ Cl -1-chloro-1,1,2,3,3,3-hexafluoropropane	359-58-0
HCFC-231	C ₃ H ₂ F ₂ Cl ₅ -pentachlorofluoropropane	NA
HCFC-231	C ₃ H ₂ F ₂ Cl ₅ -pentachlorofluoropropane	134190-48-0
HCFC-231	C ₃ H ₂ F ₂ Cl ₅ -1,1,1,2,3-pentachloro-2-fluoropropane	421-94-3
HCFC-231	C ₃ H ₂ F ₂ Cl ₅ -1,1,2,3,3-pentachloro-2-fluoropropane	NA
HCFC-231	C ₃ H ₂ F ₂ Cl ₅ -1,1,1,3,3-pentachloro-3-fluoropropane	NA
HCFC-231	C ₃ H ₂ F ₂ Cl ₅ -1,1,2,2,3-pentachloro-1-fluoropropane	NA
HCFC-231	C ₃ H ₂ F ₂ Cl ₅ -1,1,1,2,2-pentachloro-3-fluoropropane	NA
HCFC-231	C ₃ H ₂ F ₂ Cl ₅ -1,1,1,2,3-pentachloro-3-fluoropropane	NA
HCFC-231	C ₃ H ₂ F ₂ Cl ₅ -1,1,1,3,3-pentachloro-2-fluoropropane	NA
HCFC-231	C ₃ H ₂ F ₂ Cl ₅ -1,1,2,2,3-pentachloro-3-fluoropropane	NA
HCFC-231	C ₃ H ₂ F ₂ Cl ₅ -1,1,2,3,3-pentachloro-1-fluoropropane	NA
HCFC-232	C ₃ H ₂ F ₂ Cl ₄ -tetrachlorodifluoropropane	127564-82-3
HCFC-232	C ₃ H ₂ F ₂ Cl ₄ -tetrachlorodifluoropropane	134237-39-1
HCFC-232	C ₃ H ₂ F ₂ Cl ₄ -1,2,3,3-tetrachloro-1,1-difluoropropane	67879-59-8
HCFC-232ca	C ₃ H ₂ F ₂ Cl ₄ -1,1,3,3-tetrachloro-2,2-difluoropropane	1112-14-7
HCFC-232cb	C ₃ H ₂ F ₂ Cl ₄ -1,1,1,3-tetrachloro-2,2-difluoropropane	677-54-3
HCFC-232	C ₃ H ₂ F ₂ Cl ₄ -1,1,1,3-tetrachloro-3,3-difluoropropane	460-89-9
HCFC-232	C ₃ H ₂ F ₂ Cl ₄ -1,1,1,3-tetrachloro-2,3-difluoropropane	NA
HCFC-232	C ₃ H ₂ F ₂ Cl ₄ -1,1,1,2-tetrachloro-2,3-difluoropropane	NA
HCFC-232	C ₃ H ₂ F ₂ Cl ₄ -1,1,1,2-tetrachloro-3,3-difluoropropane	NA
HCFC-232	C ₃ H ₂ F ₂ Cl ₄ -1,1,3,3-tetrachloro-1,2-difluoropropane	NA
HCFC-232	C ₃ H ₂ F ₂ Cl ₄ -1,1,2,3-tetrachloro-1,2-difluoropropane	NA
HCFC-232	C ₃ H ₂ F ₂ Cl ₄ -1,1,2,3-tetrachloro-1,3-difluoropropane	NA
HCFC-232	C ₃ H ₂ F ₂ Cl ₄ -1,2,3,3-tetrachloro-1,2-difluoropropane	NA
HCFC-232	C ₃ H ₂ F ₂ Cl ₄ -1,2,2,3-tetrachloro-1,1-difluoropropane	NA
HCFC-232	C ₃ H ₂ F ₂ Cl ₄ -1,2,2,3-tetrachloro-1,3-difluoropropane	NA
HCFC-232	C ₃ H ₂ F ₂ Cl ₄ -1,1,3,3-tetrachloro-1,3-difluoropropane	NA
HCFC-232	C ₃ H ₂ F ₂ Cl ₄ -1,1,2,2-tetrachloro-3,3-difluoropropane	NA
HCFC-232	C ₃ H ₂ F ₂ Cl ₄ -1,1,2,2-tetrachloro-1,3-difluoropropane	NA
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -trichlorotrifluoropropane	61623-04-9
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -trichlorotrifluoropropane	134237-40-4
HCFC-233ca	C ₃ H ₂ F ₃ Cl ₃ -1,1,3-trichloro-2,2,3-trifluoropropane	131221-36-8
HCFC-233cc	C ₃ H ₂ F ₃ Cl ₃ -1,1,1-trichloro-2,2,3-trifluoropropane	131211-71-7
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -1,1,3-trichloro-1,2,3-trifluoropropane	54377-32-1
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -1,1,1-trichloro-2,3,3-trifluoropropane	54306-56-8
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -1,1,2-trichloro-2,3,3-trifluoropropane	13058-99-6
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -1,1,1-trichloro-3,3,3-trifluoropropane	7125-84-0
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -2,2,3-trichloro-1,1,1-trifluoropropane	7125-83-9
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -2,3,3-trichloro-1,1,1-trifluoropropane	431-51-6
HCFC-233cb	C ₃ H ₂ F ₃ Cl ₃ -1,1,3-trichloro-1,2,2-trifluoropropane	421-99-8
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -1,2,3-trichloro-1,1,2-trifluoropropane	421-95-4
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -1,1,3-trichloro-1,3,3-trifluoropropane	333-26-6

TABLE F (continued)

	Chemical	CAS Number
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -1,1,2-trichloro-1,2,3-trifluoropropane	NA
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -1,2,3-trichloro-1,2,3-trifluoropropane	NA
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -1,1,2-trichloro-1,3,3-trifluoropropane	NA
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -1,3,3-trichloro-1,1,2-trifluoropropane	NA
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -2,2,3-trichloro-1,1,3-trifluoropropane	NA
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -1,2,3-trichloro-1,1,3-trifluoropropane	NA
HCFC-233	C ₃ H ₂ F ₃ Cl ₃ -1,2,2-trichloro-1,1,3-trifluoropropane	NA
HCFC-234	C ₃ H ₂ F ₄ Cl ₂ -dichlorotetrafluoropropane	127564-83-4
HCFC-234fa	C ₃ H ₂ F ₄ Cl ₂ -1,3-dichloro-1,1,3,3-tetrafluoropropane	76140-39-1
HCFC-234ca	C ₃ H ₂ F ₄ Cl ₂ -1,3-dichloro-1,2,2,3-tetrafluoropropane	70341-81-0
HCFC-234cd	C ₃ H ₂ F ₄ Cl ₂ -1,1-dichloro-1,2,2,3-tetrafluoropropane	70192-63-1
HCFC-234	C ₃ H ₂ F ₄ Cl ₂ -1,1-dichloro-1,3,3,3-tetrafluoropropane	64712-27-2
HCFC-234	C ₃ H ₂ F ₄ Cl ₂ -1,3-dichloro-1,1,2,3-tetrafluoropropane	53149-65-8
HCFC-234	C ₃ H ₂ F ₄ Cl ₂ -1,3-dichloro-1,1,2,3-tetrafluoropropane	5306355-1
HCFC-234	C ₃ H ₂ F ₄ Cl ₂ -3,3-dichloro-1,1,1,2-tetrafluoropropane	53063-54-0
HCFC-234	C ₃ H ₂ F ₄ Cl ₂ -2,2-dichloro-1,1,3,3-tetrafluoropropane	17705-30-5
HCFC-234cb	C ₃ H ₂ F ₄ Cl ₂ -1,1-dichloro-2,2,3,3-tetrafluoropropane	4071-01-6
HCFC-234	C ₃ H ₂ F ₄ Cl ₂ -1,2-dichloro-1,2,3,3-tetrafluoropropane	425-94-5
HCFC-234cc	C ₃ H ₂ F ₄ Cl ₂ -1,3-dichloro-1,1,2,2-tetrafluoropropane	422-00-5
HCFC-234da	C ₃ H ₂ F ₄ Cl ₂ -2,3-dichloro-1,1,1,3-tetrafluoropropane	NA
HCFC-234	C ₃ H ₂ F ₄ Cl ₂ -1,1-dichloro-1,2,3,3-tetrafluoropropane	NA
HCFC-234	C ₃ H ₂ F ₄ Cl ₂ -1,2-dichloro-1,1,3,3-tetrafluoropropane	NA
HCFC-234	C ₃ H ₂ F ₄ Cl ₂ -2,3-dichloro-1,1,1,2-tetrafluoropropane	NA
HCFC-234	C ₃ H ₂ F ₄ Cl ₂ -2,2-dichloro-1,1,1,3-tetrafluoropropane	NA
HCFC-234	C ₃ H ₂ F ₄ Cl ₂ -1,2-dichloro-1,1,2,3-tetrafluoropropane	NA
HCFC-234	C ₃ H ₂ F ₄ Cl ₂ -1,3-dichloro-1,1,2,3-tetrafluoropropane	NA
HCFC-235	C ₃ H ₂ F ₅ Cl -chloropentafluoropropane	108662-83-5
HCFC-235	C ₃ H ₂ F ₅ Cl -chloropentafluoropropane	134237-83-5
HCFC-235	C ₃ H ₂ F ₅ Cl -3-chloro-1,1,1,2,3-pentafluoropropane	134251-06-2
HCFC-235da	C ₃ H ₂ F ₅ Cl -2-chloro-1,1,1,3,3-pentafluoropropane	28103-66-4
HCFC-235ca	C ₃ H ₂ F ₅ Cl -1-chloro-1,2,2,3,3-pentafluoropropane	679-99-2
HCFC-235cc	C ₃ H ₂ F ₅ Cl -1-chloro-1,1,2,2,3-pentafluoropropane	677-55-4
HCFC-235fa	C ₃ H ₂ F ₅ Cl -1-chloro-1,1,3,3,3-pentafluoropropane	460-92-4
HCFC-235eb	C ₃ H ₂ F ₅ Cl -3-chloro-1,1,1,2,2-pentafluoropropane	422-02-6
HCFC-235	C ₃ H ₂ F ₅ Cl -2-chloro-1,1,1,2,3-pentafluoropropane	NA
HCFC-235	C ₃ H ₂ F ₅ Cl -1-chloro-1,1,2,3,3-pentafluoropropane	NA
HCFC-235	C ₃ H ₂ F ₅ Cl -2-chloro-1,1,2,3,3-pentafluoropropane	NA
HCFC-241	C ₃ H ₃ FCl ₄ -tetrachlorofluoropropane	NA
HCFC-241	C ₃ H ₃ FCl ₄ -tetrachlorofluoropropane	134190-49-1
HCFC-241	C ₃ H ₃ FCl ₄ -1,1,1,2-tetrachloro-3-fluoropropane	84816-05-7
HCFC-241	C ₃ H ₃ FCl ₄ -1,1,1,3-tetrachloro-3-fluoropropane	23153-22-2
HCFC-241	C ₃ H ₃ FCl ₄ -1,1,2,3-tetrachloro-3-fluoropropane	21981-25-9
HCFC-241	C ₃ H ₃ FCl ₄ -1,1,2,2-tetrachloro-1-fluoropropane	7126-06-9
HCFC-241	C ₃ H ₃ FCl ₄ -1,1,2,3-tetrachloro-2-fluoropropane	3175-26-6
HCFC-241	C ₃ H ₃ FCl ₄ -1,1,1,2-tetrachloro-2-fluoropropane	3175-25-5
HCFC-241	C ₃ H ₃ FCl ₄ -1,1,2,3-tetrachloro-1-fluoropropane	666-27-3
HCFC-241	C ₃ H ₃ FCl ₄ -1,1,1,3-tetrachloro-2-fluoropropane	NA
HCFC-241	C ₃ H ₃ FCl ₄ -1,1,2,2-tetrachloro-3-fluoropropane	NA
HCFC-241	C ₃ H ₃ FCl ₄ -1,2,2,3-tetrachloro-1-fluoropropane	NA
HCFC-241	C ₃ H ₃ FCl ₄ -1,1,3,3-tetrachloro-1-fluoropropane	NA
HCFC-241	C ₃ H ₃ FCl ₄ -1,1,3,3-tetrachloro-2-fluoropropane	NA
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -trichlorodifluoropropane	127564-90-3
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -trichlorodifluoropropane	134237-42-6

TABLE F (continued)

	Chemical	CAS Number
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,3,3-trichloro-1,1-difluoropropane	460-63-9
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,2,3-trichloro-1,2-difluoropropane	7164-14-9
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,1,3-trichloro-2,2-difluoropropane	1112-13-6
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,2,3-trichloro-1,1-difluoropropane	431-24-3
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,1,1-trichloro-2,2-difluoropropane	1112-05-6
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,2,2-trichloro-1,1-difluoropropane	7126-05-8
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,1,2-trichloro-1,2-difluoropropane	7126-04-7
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,1,1-trichloro-2,3-difluoropropane	NA
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,1,2-trichloro-1,3-difluoropropane	NA
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,1,3-trichloro-1,2-difluoropropane	NA
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,1,2-trichloro-2,3-difluoropropane	NA
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,2,2-trichloro-1,3-difluoropropane	NA
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -2,2,3-trichloro-1,1-difluoropropane	NA
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,1,1-trichloro-3,3-difluoropropane	NA
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,1,3-trichloro-1,3-difluoropropane	NA
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,1,2-trichloro-3,3-difluoropropane	NA
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,1,3-trichloro-2,3-difluoropropane	NA
HCFC-242	C ₃ H ₃ F ₂ Cl ₃ -1,2,3-trichloro-1,3-difluoropropane	NA
HCFC-243	C ₃ H ₃ F ₃ Cl ₂ -dichlorotrifluoropropane	116890-51-8
HCFC-243	C ₃ H ₃ F ₃ Cl ₂ -dichlorotrifluoropropane	134237-43-7
HCFC-243	C ₃ H ₃ F ₃ Cl ₂ -2,2-dichloro-1,1,1-trifluoropropane	7126-01-4
HCFC-243cc	C ₃ H ₃ F ₃ Cl ₂ -1,1-dichloro-1,2,2-trifluoropropane	7125-99-7
HCFC-243	C ₃ H ₃ F ₃ Cl ₂ -1,2-dichloro-1,1,2-trifluoropropane	7126-00-3
HCFC-243da	C ₃ H ₃ F ₃ Cl ₂ -2,3-dichloro-1,1,1-trifluoropropane	338-75-0
HCFC-243ca	C ₃ H ₃ F ₃ Cl ₂ -1,3-dichloro-1,2,2-trifluoropropane	67406-68-2
HCFC-243cb	C ₃ H ₃ F ₃ Cl ₂ -1,1-dichloro-2,2,3-trifluoropropane	70192-70-0
HCFC-243	C ₃ H ₃ F ₃ Cl ₂ -3,3-dichloro-1,1,1-trifluoropropane	460-69-5
HCFC-243	C ₃ H ₃ F ₃ Cl ₂ -1,3-dichloro-1,1,2-trifluoropropane	NA
HCFC-243	C ₃ H ₃ F ₃ Cl ₂ -1,2-dichloro-1,1,3-trifluoropropane	NA
HCFC-243	C ₃ H ₃ F ₃ Cl ₂ -1,1-dichloro-1,2,3-trifluoropropane	NA
HCFC-243	C ₃ H ₃ F ₃ Cl ₂ -2,3-dichloro-1,1,2-trifluoropropane	NA
HCFC-243	C ₃ H ₃ F ₃ Cl ₂ -2,2-dichloro-1,1,3-trifluoropropane	NA
HCFC-243	C ₃ H ₃ F ₃ Cl ₂ -1,2-dichloro-1,2,3-trifluoropropane	NA
HCFC-243	C ₃ H ₃ F ₃ Cl ₂ -1,3-dichloro-1,1,3-trifluoropropane	NA
HCFC-243	C ₃ H ₃ F ₃ Cl ₂ -1,1-dichloro-1,3,3-trifluoropropane	NA
HCFC-243	C ₃ H ₃ F ₃ Cl ₂ -3,3-dichloro-1,1,2-trifluoropropane	NA
HCFC-243	C ₃ H ₃ F ₃ Cl ₂ -2,3-dichloro-1,1,3-trifluoropropane	NA
HCFC-243	C ₃ H ₃ F ₃ Cl ₂ -1,3-dichloro-1,2,3-trifluoropropane	NA
HCFC-244	C ₃ H ₃ F ₄ Cl -chlorotetrafluoropropane	NA
HCFC-244	C ₃ H ₃ F ₄ Cl -chlorotetrafluoropropane	134190-50-4
HCFC-244db	C ₃ H ₃ F ₄ Cl -2-chloro-1,1,1,3-tetrafluoropropane	117970-90-8
HCFC-244ca	C ₃ H ₃ F ₄ Cl -3-chloro-1,1,2,2-tetrafluoropropane	679-85-6
HCFC-244cb	C ₃ H ₃ F ₄ Cl -1-chloro-1,2,2,3-tetrafluoropropane	67406-66-0
HCFC-244fb	C ₃ H ₃ F ₄ Cl -1-chloro-1,1,3,3-tetrafluoropropane	2730-64-5
HCFC-244da	C ₃ H ₃ F ₄ Cl -2-chloro-1,1,3,3-tetrafluoropropane	19041-02-2
HCFC-244bb	C ₃ H ₃ F ₄ Cl -2-chloro-1,1,1,2-tetrafluoropropane	421-73-8
HCFC-244cc	C ₃ H ₃ F ₄ Cl -1-chloro-1,1,2,2-tetrafluoropropane	421-75-0
HCFC-244	C ₃ H ₃ F ₄ Cl -1-chloro-1,1,2,3-tetrafluoropropane	NA
HCFC-244	C ₃ H ₃ F ₄ Cl -3-chloro-1,1,1,2-tetrafluoropropane	NA
HCFC-244	C ₃ H ₃ F ₄ Cl -2-chloro-1,1,2,3-tetrafluoropropane	NA
HCFC-244	C ₃ H ₃ F ₄ Cl -3-chloro-1,1,1,3-tetrafluoropropane	NA
HCFC-244	C ₃ H ₃ F ₄ Cl -3-chloro-1,1,2,3-tetrafluoropropane	NA
HCFC-251	C ₃ H ₄ FCl ₃ -trichlorofluoropropane	NA

TABLE F (continued)

	Chemical	CAS Number
HCFC-251	C ₃ H ₄ FCl ₃ -trichlorofluoropropane	134190-51-5
HCFC-251	C ₃ H ₄ FCl ₃ -1,2,3-trichloro-1-fluoropropane	84847-80-3
HCFC-251	C ₃ H ₄ FCl ₃ -1,2,3-trichloro-1-fluoropropane	84847-79-0
HCFC-251	C ₃ H ₄ FCl ₃ -1,2,3-trichloro-1-fluoropropane	76985-34-7
HCFC-251	C ₃ H ₄ FCl ₃ -1,2,3-trichloro-1-fluoropropane	76985-33-6
HCFC-251	C ₃ H ₄ FCl ₃ -1,2,3-trichloro-1-fluoropropane	67832-50-2
HCFC-251	C ₃ H ₄ FCl ₃ -1,2,3-trichloro-1-fluoropropane	67832-44-4
HCFC-251	C ₃ H ₄ FCl ₃ -1,2,3-trichloro-2-fluoropropane	7126-16-1
HCFC-251	C ₃ H ₄ FCl ₃ -1,2,2-trichloro-3-fluoropropane	70192-89-1
HCFC-251	C ₃ H ₄ FCl ₃ -1,1,3-trichloro-1-fluoropropane	818-99-5
HCFC-251	C ₃ H ₄ FCl ₃ -1,1,3-trichloro-2-fluoropropane	76937-36-5
HCFC-251	C ₃ H ₄ FCl ₃ -1,1,2-trichloro-1-fluoropropane	421-41-0
HCFC-251	C ₃ H ₄ FCl ₃ -1,1,2-trichloro-2-fluoropropane	3175-24-4
HCFC-251	C ₃ H ₄ FCl ₃ -1,1,1-trichloro-2-fluoropropane	NA
HCFC-251	C ₃ H ₄ FCl ₃ -1,1,1-trichloro-3-fluoropropane	NA
HCFC-251	C ₃ H ₄ FCl ₃ -1,1,2-trichloro-3-fluoropropane	NA
HCFC-251	C ₃ H ₄ FCl ₃ -1,1,3-trichloro-3-fluoropropane	NA
HCFC-251	C ₃ H ₄ FCl ₃ -1,2,2-trichloro-1-fluoropropane	NA
HCFC-251	C ₃ H ₄ FCl ₃ -1,2,3-trichloro-1-fluoropropane	NA
HCFC-252	C ₃ H ₄ F ₂ Cl ₂ -dichlorodifluoropropane	NA
HCFC-252	C ₃ H ₄ F ₂ Cl ₂ -dichlorodifluoropropane	134190-52-6
HCFC-252cb	C ₃ H ₄ F ₂ Cl ₂ -1,1-dichloro-2,2-difluoropropane	1112-01-2
HCFC-252	C ₃ H ₄ F ₂ Cl ₂ -1,1-dichloro-3,3-difluoropropane	131404-17-6
HCFC-252	C ₃ H ₄ F ₂ Cl ₂ -1,1-dichloro-1,3-difluoropropane	121612-64-4
HCFC-252	C ₃ H ₄ F ₂ Cl ₂ -1,2-dichloro-1,1-difluoropropane	7126-15-0
HCFC-252	C ₃ H ₄ F ₂ Cl ₂ -1,2-dichloro-2,3-difluoropropane	70192-74-4
HCFC-252	C ₃ H ₄ F ₂ Cl ₂ -2,3-dichloro-1,1-difluoropropane	82578-00-5
HCFC-252	C ₃ H ₄ F ₂ Cl ₂ -1,3-dichloro-1,1-difluoropropane	819-00-1
HCFC-252	C ₃ H ₄ F ₂ Cl ₂ -1,3-dichloro-1,2-difluoropropane	111483-26-2
HCFC-252ca	C ₃ H ₄ F ₂ Cl ₂ -1,3-dichloro-2,2-difluoropropane	1112-36-3
HCFC-252	C ₃ H ₄ F ₂ Cl ₂ -1,1-dichloro-1,2-difluoropropane	NA
HCFC-252	C ₃ H ₄ F ₂ Cl ₂ -1,1-dichloro-2,3-difluoropropane	NA
HCFC-252	C ₃ H ₄ F ₂ Cl ₂ -1,2-dichloro-1,2-difluoropropane	NA
HCFC-252	C ₃ H ₄ F ₂ Cl ₂ -1,2-dichloro-1,3-difluoropropane	NA
HCFC-252	C ₃ H ₄ F ₂ Cl ₂ -1,3-dichloro-1,3-difluoropropane	NA
HCFC-252	C ₃ H ₄ F ₂ Cl ₂ -2,2-dichloro-1,1-difluoropropane	NA
HCFC-252	C ₃ H ₄ F ₂ Cl ₂ -2,2-dichloro-1,3-difluoropropane	NA
HCFC-253	C ₃ H ₄ F ₃ Cl -chlorotrifluoropropane	26588-23-8
HCFC-253	C ₃ H ₄ F ₃ Cl -chlorotrifluoropropane	134237-44-8
HCFC-253	C ₃ H ₄ F ₃ Cl -2-chloro-1,1,1-trifluoropropane	421-47-6
HCFC-253	C ₃ H ₄ F ₃ Cl -3-chloro-1,1,1-trifluoropropane	460-35-5
HCFC-253	C ₃ H ₄ F ₃ Cl -1-chloro-1,1,2-trifluoropropane	134251-05-1
HCFC-253	C ₃ H ₄ F ₃ Cl -2-chloro-1,1,2-trifluoropropane	69202-10-4
HCFC-253	C ₃ H ₄ F ₃ Cl -3-chloro-1,1,2-trifluoropropane	121612-65-5
HCFC-253	C ₃ H ₄ F ₃ Cl -1-chloro-1,1,3-trifluoropropane	83124-56-5
HCFC-253cb	C ₃ H ₄ F ₃ Cl -1-chloro-1,2,2-trifluoropropane	70192-76-6
HCFC-253ca	C ₃ H ₄ F ₃ Cl -1-chloro-2,2,3-trifluoropropane	56758-54-4
HCFC-253	C ₃ H ₄ F ₃ Cl -2-chloro-1,1,3-trifluoropropane	NA
HCFC-253	C ₃ H ₄ F ₃ Cl -3-chloro-1,1,3-trifluoropropane	NA
HCFC-253	C ₃ H ₄ F ₃ Cl -1-chloro-1,2,3-trifluoropropane	NA
HCFC-253	C ₃ H ₄ F ₃ Cl -2-chloro-1,2,3-trifluoropropane	NA
HCFC-261	C ₃ H ₅ FCl ₂ -dichlorofluoropropane	127404-11-9
HCFC-261	C ₃ H ₅ FCl ₂ -dichlorofluoropropane	134237-45-9

TABLE F (continued)

	Chemical	CAS Number
HCFC-261	C ₃ H ₅ FCI ₂ -1,1-dichloro-1-fluoropropane	7799-56-6
HCFC-261	C ₃ H ₅ FCI ₂ -1,1-dichloro-2-fluoropropane	53074-31-0
HCFC-261	C ₃ H ₅ FCI ₂ -1,1-dichloro-3-fluoropropane	53074-30-9
HCFC-261	C ₃ H ₅ FCI ₂ -1,2-dichloro-1-fluoropropane	7799-55-5
HCFC-261ba	C ₃ H ₅ FCI ₂ -1,2-dichloro-2-fluoropropane	420-97-3
HCFC-261	C ₃ H ₅ FCI ₂ -1,2-dichloro-3-fluoropropane	453-01-0
HCFC-261	C ₃ H ₅ FCI ₂ -1,3-dichloro-1-fluoropropane	83124-60-1
HCFC-261	C ₃ H ₅ FCI ₂ -1,3-dichloro-2-fluoropropane	816-38-6
HCFC-261	C ₃ H ₅ FCI ₂ -2,2-dichloro-1-fluoropropane	NA
HCFC-262	C ₃ H ₅ F ₂ CI -chlorodifluoropropane	NA
HCFC-262	C ₃ H ₅ F ₂ CI -chlorodifluoropropane	134190-53-7
HCFC-262	C ₃ H ₅ F ₂ CI -1-chloro-1,1-difluoropropane	421-02-3
HCFC-262	C ₃ H ₅ F ₂ CI -2-chloro-1,1-difluoropropane	430-93-3
HCFC-262	C ₃ H ₅ F ₂ CI -3-chloro-1,1-difluoropropane	83124-57-6
HCFC-262	C ₃ H ₅ F ₂ CI -1-chloro-1,2-difluoropropane	430-96-6
HCFC-262	C ₃ H ₅ F ₂ CI -1-chloro-2,3-difluoropropane	37161-81-2
HCFC-262	C ₃ H ₅ F ₂ CI -2-chloro-1,3-difluoropropane	102738-79-4
HCFC-262ca	C ₃ H ₅ F ₂ CI -1-chloro-2,2-difluoropropane	420-99-5
HCFC-262	C ₃ H ₅ F ₂ CI -2-chloro-1,2-difluoropropane	NA
HCFC-262	C ₃ H ₅ F ₂ CI -1-chloro-1,3-difluoropropane	NA
HCFC-271	C ₃ H ₆ FCI -chlorofluoropropane	NA
HCFC-271	C ₃ H ₆ FCI -chlorofluoropropane	134190-54-8
HCFC-271	C ₃ H ₆ FCI -1-chloro-1-fluoropropane	430-55-7
HCFC-271	C ₃ H ₆ FCI -1-chloro-2-fluoropropane	430-46-6
HCFC-271	C ₃ H ₆ FCI -1-chloro-3-fluoropropane	462-38-4
HCFC-271	C ₃ H ₆ FCI -2-chloro-1-fluoropropane	20372-78-5
HCFC-271	C ₃ H ₆ FCI -2-chloro-2-fluoropropane	420-44-0
	All isomers of the above chemicals	



**Minnesota Pollution
Control Agency**

520 Lafayette Road North
St. Paul, MN 55155-4194

CAP-GI-09I

Requirements: State Rules
Air Quality Permit Program

Facility Information-Minnesota State Air Quality (AQ) Rules

AQ Facility ID No.: 08300007

Facility Name: Magellan Pipeline Co LP-Marshall Terminal

Some businesses and activities in Minnesota are subject to the following rules. Read each question to determine if the rule applies to you.

1) Minnesota Standards of Performance for Stationary Sources (Minn. R. ch. 7011)

- 1a) Does your facility have any equipment that meets the following definition?
"A furnace, boiler or other combustion equipment in Minnesota which burns fossil fuel for the purpose of producing steam, hot water, hot air, or other hot liquid, gas, or solid, where the smoke doesn't have direct contact with the heated medium for which another standard of performance has not been promulgated."
☒ No, my facility **is not** subject to Minn. R. 7011.0500-7011.0551. Go to question 1b.
☐ Yes, my facility **is** subject to Minn. R. 7011.0500-7011.0551. Standards of Performance for Indirect Heating Fossil-Fuel Burning Equipment. (Read the rule to determine the specific requirements that apply to your facility.)
- 1b) Is your facility type or process equipment found in Table H on page 3? This table contains only state-specific requirements; it does not contain state rules that incorporate federal rules by reference.
☐ No, none of the Minnesota Rules listed in Table H apply to my facility. Go to question 2.
☒ Yes, my facility or process equipment may be subject to the rule associated with it in Table H. Read the associated rule to see if it applies.
- 1c) After reading through Table H and any rule that may apply to your facility or equipment, list the ones that do apply to your air emission source(s) below. Again, Table H contains only state-specific requirements; it does not contain state rules that incorporate federal rules by reference. You do not need to list the state rule that incorporates a federal rule by reference. You do not need to list the Standards of Performance for Indirect Heating Fossil-Fuel Burning Equipment again, if it applies (see 1a, above).

Minnesota Rule Part that Applies	What the Rule Part Applies to (Whole facility or Specific Piece of Equipment)	Emission Unit ID Number
7011.2300, subp. 1	Dual Fuel Reciprocating CI Engine	EQUI 002/ EU 002

3) Standards of Performance for Industrial Process Equipment (Minn. R. 7011.0700 - 7011.0735)

3a) Do you have any industrial process equipment on-site that is not regulated by another Standard of Performance (NSPS or MN Rules Standard of Performance)?

☒ No, my equipment is not subject to this rule. Go to question 4.

☐ Yes. Go to 3b.

3b) Opacity Standard

(Note: Opacity is a measure of visible emissions or how much of the view is obscured by stack emissions. The emissions causing opacity are often smoke or dust.)

For industrial process equipment which was *in operation before July 9, 1969*, the equipment shall not exhibit greater than 20 percent opacity, except that a maximum of 60 percent opacity shall be permissible for four minutes in any 60 minute period and a maximum of 40 percent opacity shall be permissible for four additional minutes in any 60 minute period.

For industrial process equipment which was *not in operation before July 9, 1969*, the equipment shall not exhibit greater than 20 percent opacity.

3c) Does the industrial process equipment have particulate control equipment with a collection efficiency of at least 99 percent if it was in operation before July 9, 1969, or 99.7 percent if it was not in operation before July 9, 1969?

☐ No. Go to question 3d.

☐ Yes. My equipment is not subject to the remaining requirements of this rule. Go to question 4.

3d) Is the industrial process equipment located outside of the seven county Minneapolis-St. Paul metropolitan region and outside of the city of Duluth and at least 1/4 mile from any residence or public roadway, and does the industrial process equipment have particulate control equipment with a collection efficiency of at least 85 percent and is the operation of the entire facility in compliance with all ambient air quality standards?

☐ No, my equipment is subject to the remaining requirements. You can determine applicable limits using Table I.

☐ Yes, my equipment is not subject to the remaining requirements of this rule. Go to question 4.

4) Return to Form CAP-GI-09, question 6b.

Table H: Minnesota Standards of Performance for Stationary Sources *

Facility or Equipment Type	Associated Minnesota Rule
Direct Heating Equipment	7011.0600 through 7011.0625
Concrete Manufacturing Plants	7011.0850 through 7011.0860
Stage One Vapor Recovery	7011.0865 through 7011.0870
Hot Mix Asphalt Plants	7011.0900 through 7011.0925
Bulk Agricultural Commodity Facilities (Grain Elevators)	7011.1000 through 7011.1015
Coal Handling Facilities	7011.1100 through 7011.1140
Incinerators (waste combustors)	7011.1201 through 7011.1285
Sewage Sludge Incinerators	7011.1300 through 7011.1325
Petroleum Refineries	7011.1400 through 7011.1430
Liquid Petroleum and Volatile Organic Compounds (VOCs) Storage Vessels	7011.1500 through 7011.1515
Sulfuric Acid Plants	7011.1600 through 7011.1630
Nitric Acid Plants	7011.1700 through 7011.1725
Brass and Bronze Plants	7011.1900 through 7011.1915
Iron and Steel Plants	7011.2000 through 7011.2015
Inorganic Fibrous Materials	7011.2100 through 7011.2105
Stationary Internal Combustion Engine (Generators)	7011.2300
Municipal Solid Waste Landfills	7011.3500 through 7011.3510
Asbestos	7011.9921 through 7011.9927

* This table does **not** include Minnesota Rules which incorporate federal New Source Performance Standards (NSPS) and/or National Emission standards for Hazardous Air Pollutant Sources (NESHAPS) by reference.

1a) AQ Facility ID number: 08300007 **1b)** Agency Interest ID number: _____

2) Facility name: Magellan Pipeline Co LP-Marshall Terminal
3) Check and describe insignificant activities

Rule citation	Description of activities at the facility
<input type="checkbox"/> 7007.1300, subp. 3(A)	
<input type="checkbox"/> 7007.1300, subp. 3(B)(1)	
<input type="checkbox"/> 7007.1300, subp. 3(B)(2)	
<input type="checkbox"/> 7007.1300, subp. 3(C)(1)	
<input type="checkbox"/> 7007.1300, subp. 3(C)(2)	
<input type="checkbox"/> 7007.1300, subp. 3(D)	
<input type="checkbox"/> 7007.1300, subp. 3(E)	
<input checked="" type="checkbox"/> 7007.1300, subp. 3(F)	Fuel additive storage tanks, butane unloading, ethanol unloading
<input type="checkbox"/> 7007.1300, subp. 3(G)	
<input type="checkbox"/> 7007.1300, subp. 4	
<input type="checkbox"/> 7008.4100	
<input type="checkbox"/> 7008.4110	

4) If you are applying for an option 1 capped permit for your facility, have you included all quantifiable insignificant activities on the appropriate forms (e.g. CAP-GI-04, CAP-GI-05B, CAP-GI-05C, CAP-GI-07, etc)?

☐ Yes ☒ No I am applying for an option 2 capped permit.

Form CAP-IA instructions

Three tables of insignificant activities are provided below.

- Table IA-01.1, Insignificant activities not required to be listed**, specifies those activities that **do not** need to be included in your permit application.
- Table IA-01.2, Insignificant activities required to be listed**, specifies those activities that must be included in your application, on the CAP-IA form.

Attachment 1

Emission Calculation Summary Tables

Emissions Unit	EU No.	Criteria Pollutants (t/year)					Hazardous Air Pollutants (t/year)					Greenhouse Gases (t/year)								
		VOC	CO	NOx	SOx	PM-10	PM-FH	PSUE-10	2,3,4-TMP	Benzene	Polychlorinated Biphenyls	Hexachlorocyclopentadiene	Total	Formaldehyde	Acrolein	Total HAP	CO ₂	CH ₄	N ₂ O	CO ₂ e
Coal-Fired Unit	EU-001	16.52	-	-	-	-	-	-	0.13	0.15	0.02	0.26	0.21	0.08	-	0.85	-	-	-	-
Coal-Fired Unit	EU-002	14.03	5.51	-	-	-	-	-	0.39	0.44	0.05	0.64	0.54	0.25	-	2.55	3,981.46	0.17	0.05	3,915.72
Coal-Fired Unit	EU-003	12.32	-	-	-	-	-	-	1.78	2.02	0.05	2.92	2.92	1.17	-	0.19	-	-	-	-
Coal-Fired Unit	EU-004	6.18	8.10	0.53	0.24	1.53	1.48	-	2.56	2.66	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-005	0.03	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-006	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-007	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-008	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-009	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-010	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-011	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-012	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-013	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-014	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-015	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-016	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-017	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-018	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-019	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-020	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-021	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-022	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-023	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-024	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-025	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-026	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-027	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-028	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-029	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-030	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-031	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-032	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-033	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-034	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-035	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-036	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-037	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-038	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-039	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-040	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-041	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-042	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-043	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-044	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-045	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-046	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-047	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-048	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-049	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-050	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-051	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-052	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-053	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-054	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-055	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-056	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-057	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-058	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-059	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-060	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-061	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-062	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-063	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-064	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-065	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-066	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-067	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-068	0.33	-	-	-	-	-	-	2.67	2.67	0.14	4.73	4.73	1.49	0.17	3.90	5,042.59	0.20	0.04	5,059.17
Coal-Fired Unit	EU-069	0.33	-	-	-	-	-	-</												

Emissions Unit		Criteria Pollutants (lb/day)							Hazardous Air Pollutants (lb/year)							Greenhouse Gases (lb/year)					
		VOC	CO	NOx	SOx	PM-10	PM2.5	2,3,4-TMP	Benzene	1,2-Dichloroethane	Hevane	Toluene	Xylenes	Formaldehyde	Acetaldehyde	Acetone	Total HAP	CO ₂	CH ₄	N ₂ O	CO ₂ e
Gasoline-loading Uncovered Emission	BQUL17/RS 001	3.77	-	-	-	-	-	2.88E-02	3.35E-02	3.7E-03	5.95E-02	4.84E-02	1.86E-02	-	-	-	1.93E-01	-	-	-	-
ACU Stack	STBL17/RS 001	11.20	3.20	1.26	-	-	-	8.06E-02	1.01E-01	1.1E-02	1.79E-01	1.46E-01	5.00E-02	-	-	-	5.83E-01	908.59	0.04	0.01	912.27
Distillate-loading Emission	LQUL17/RS 001	0.55	-	-	-	-	-	4.10E-04	4.61E-04	5.1E-05	8.19E-04	6.66E-04	2.96E-04	-	-	-	2.60E-03	-	-	-	-
Distillate Uncovered Emission	BQUL17/RS 002	1.41	1.95	15.56	0.12	0.05	0.44	5.30E-05	6.07E-05	6.74E-05	1.08E-04	8.77E-05	3.37E-05	-	-	-	3.51E-04	1.17E-01	1.15E-05	0.01	1.155E-06
Tank No. 101	Intg	0.01	-	-	-	-	-	6.10E-04	6.66E-04	7.67E-05	1.22E-03	9.81E-04	3.81E-04	-	-	-	3.06E-03	-	-	-	-
Tank No. 127	EQUL17/RS 001	0.08	-	-	-	-	-	6.50E-03	7.32E-03	8.13E-04	1.30E-02	1.06E-02	4.07E-03	-	-	-	4.23E-02	-	-	-	-
Tank No. 010	EQUL17/RS 002	0.81	-	-	-	-	-	2.77E-04	3.12E-04	3.47E-05	5.55E-04	4.51E-04	1.73E-04	-	-	-	1.60E-03	-	-	-	-
Tank No. 011	EQUL17/RS 003	0.03	-	-	-	-	-	7.01E-03	7.88E-03	8.76E-04	1.40E-02	1.14E-02	4.38E-03	-	-	-	4.58E-02	-	-	-	-
Tank No. 022	EQUL17/RS 004	0.65	-	-	-	-	-	5.19E-04	5.84E-04	6.48E-05	1.04E-03	8.43E-04	3.24E-04	-	-	-	3.37E-03	-	-	-	-
Tank No. 075	EQUL17/RS 005	0.06	-	-	-	-	-	5.50E-03	7.32E-03	8.13E-04	1.30E-02	1.06E-02	4.07E-03	-	-	-	4.23E-02	-	-	-	-
Tank No. 074	EQUL17/RS 006	0.61	-	-	-	-	-	2.77E-04	3.12E-04	3.47E-05	5.55E-04	4.51E-04	1.73E-04	-	-	-	1.60E-03	-	-	-	-
Tank No. 076	EQUL17/RS 007	0.03	-	-	-	-	-	2.77E-04	3.12E-04	3.47E-05	5.55E-04	4.51E-04	1.73E-04	-	-	-	1.60E-03	-	-	-	-
Tank No. 738	BQUL17/RS 008	0.03	-	-	-	-	-	7.76E-04	8.73E-04	9.70E-05	1.55E-03	1.26E-03	4.85E-04	-	-	-	5.04E-03	-	-	-	-
Tank No. 739	EQUL17/RS 009	0.10	-	-	-	-	-	1.36E-03	1.53E-03	1.70E-04	2.72E-03	2.21E-03	8.55E-04	-	-	-	8.84E-03	-	-	-	-
Roof Tank	BQUL17/RS 011	0.17	-	-	-	-	-	6.03E-03	6.78E-03	7.54E-04	1.21E-02	9.65E-03	3.77E-03	-	-	-	3.92E-02	-	-	-	-
Roof Tank Landings	738D	0.17	-	-	-	-	-	2.61E-02	2.94E-02	3.26E-03	5.22E-02	4.24E-02	1.63E-02	-	-	-	1.70E-01	-	-	-	-
Tank Cleaning Events	739D	148.55	-	-	-	-	-	1.83E-04	2.05E-04	2.26E-05	3.65E-04	2.97E-04	1.14E-04	-	-	-	1.18E-03	-	-	-	-
Additive Tanks	Intg	0.02	-	-	-	-	-	4.17E-04	4.39E-04	5.21E-05	8.31E-04	6.77E-04	2.60E-04	-	-	-	2.71E-03	-	-	-	-
Equipment Puffings	FLCL17/PS 001	0.05	-	-	-	-	-	1.83E-04	2.05E-04	2.26E-05	3.65E-04	2.97E-04	1.14E-04	-	-	-	1.18E-03	-	-	-	-
Bottoms Unloading	Intg	0.00	-	-	-	-	-	4.17E-04	4.39E-04	5.21E-05	8.31E-04	6.77E-04	2.60E-04	-	-	-	2.71E-03	-	-	-	-
Ethanol Unloading	Intg	0.11	-	-	-	-	-	8.32E-06	9.35E-06	1.04E-06	1.84E-05	1.35E-05	5.20E-06	-	-	-	5.41E-05	-	-	-	-
Ethanol Unloading	Intg	0.03	-	-	-	-	-	4.50E-06	5.05E-06	5.63E-07	8.00E-06	7.57E-06	2.87E-06	-	-	-	2.87E-06	-	-	-	-
PTE for All Emissions Units		181.81	5.05	20.14	0.12	0.44	0.13	0.18	0.23	0.10	0.15	0.13	0.13	0.04	8.90E-04	3.78E-04	1.27	2,062.16	0.09	0.02	2,067.13
PTE Excluding Integ. Activities		181.65	5.05	20.14	0.12	0.44	0.13	0.18	0.23	0.10	0.15	0.13	0.13	0.04	8.90E-04	3.78E-04	1.27	2,062.16	0.09	0.02	2,067.13

Magellan Pipeline Co., LP - Marshall Terminal
Potential to Emit - July 2022
Loading Rack

Maximum Loading Rack Throughput: 368,000,000 gal/yr

Criteria Pollutants

Product Loaded	Gasoline & Ethanol	Distillate Fuels	Totals
Control Device	VCU	None	
Saturation Factor S	1.00	1.00	
Loading Temperature T, (°F)	40.96	40.96	
Avg. True Vapor Pressure P (psia)	4.835	0.004	
Vapor Molecular Weight M	62.00	130.00	
Throughput Q, (gal/yr)	336,000,000	32,000,000	
Loading Loss Factor L _L (lb/1000-gal)	7.46	0.014	
Uncontrolled VOC (L _L *Q), ton/yr	1,253.43	0.22	1,253.65
Vapor Capture Efficiency	0.987	N/A	
VOC Emission Factor (mg/l-loaded)	35.00	N/A	
Uncaptured VOC Emissions (ton/yr) - Loading Fugitive	16.29	0.22	16.52
Controlled VOC Emissions (ton/yr)	49.07	0.00	49.07
Total VOC Emissions (ton/yr)	65.37	0.22	65.59
NOx Emission Factor (lb./1000-gal-loaded)	0.0334	0.00	
NOx Emissions (ton/yr)	5.61	0.00	5.61
CO Emission Factor (lb./1000-gal-loaded)	0.0835	0.00	
CO Emissions (ton/yr)	14.03	0.00	14.03

Total Potential VOC and HAP Emissions (ton/yr)

Process/Emission Point	VOC	2,2,4 TMP 0.80% of VOC	Benzene 0.99% of VOC	Ethylbenzene 0.10% of VOC	Hexane 1.60% of VOC	Toluene 1.30% of VOC	Mixed Xylenes 0.50% of VOC
Gasoline-loading uncaptured emissions	16.29	0.130	0.147	0.016	0.261	0.212	0.081
VCU stack	49.07	0.393	0.442	0.049	0.785	0.638	0.245
Distillate loading emissions	0.22	1.79E-03	2.02E-03	2.24E-04	3.59E-03	2.97E-03	1.12E-03
Total Emissions (ton/yr)	65.59	0.525	0.590	0.066	1.049	0.853	0.328

Notes

1. Loading loss equation from AP-42, Section 5.2 L_L = 12.46*SPM/T
2. Saturation Factor (S) is for vapor-balanced submerged loading
3. Physical properties for gasoline are from TankESP for Gasoline RVP13 at the annual average loading temperature
4. Physical properties for distillate fuels are from TankESP for Jet Kerosene at the annual average loading temperature
5. VOC factor for VCU is the proposed permit limit of 35 mg VOC emitted for every liter of gasoline loaded.
6. VOC emissions from distillate loading assumed to be uncontrolled.
7. Gasoline HAP fractions from Table 3-2 of *Gasoline Distribution Industry (Stage 1)-Background Information for Proposed Standards* (EPA January 1994)
8. Gasoline HAP fractions assumed for emissions from distillate-fuel loading.
9. 2,2,4 TMP is 2,2,4 trimethylpentane.
10. NOx and CO emission factors are from the VCU manufacturer

Magellan Pipeline Co., LP - Marshall Terminal
Potential to Emit - July 2022
Duel Fuel Engine

		Criteria Pollutant Emissions																	
Emission Point No.	Hours of Operation Hours/year	Energy Input MMBtu/hr	Energy Input MMt/year	Non-methane VOC Emissions ¹ 0.1 lb/MMBtu		PM _{10-2.5} Emissions ² 0.0077 lb/MMBtu		PM _{10-2.5} Emissions ³ 0.062 lb/MMBtu		PM _{10-2.5} Emissions ⁴ 0.0479 lb/MMBtu		PM _{2.5} Emissions ⁵ 0.0153 lb/MMBtu		SOx Emissions ⁶ 0.0153 lb/MMBtu		NOx Emissions ⁷ 2.7 lb/MMBtu		CO Emissions ⁸ 10.262 lb/MMBtu	
				Tons/year	Tons/year	Tons/year	Tons/year	Tons/year	Tons/year	Tons/year	Tons/year	Tons/year	Tons/year	Tons/year	Tons/year	Tons/year	Tons/year	Tons/year	Tons/year
UNIT 2 (E106)	7,260	810	7.05	67,845	6.13	0.24	1.92	1.53	3.48	3.57	83.49	8.10							

NOTES

1. Non-methane TOC (NMTOC) determined using emission factor (0.2 lb/MMBtu) from AP-42 Table 3.4-1 using energy input
2. CO₂ determined from AP-42 Table 3.4-1 where $S_e = 0.33\%$ m fuel oil, $S_o = 0\%$ in natural gas, yielding a factor of 0.0165 lb/MMBtu for the CO₂ emission factor (0.067-0.33+0.895*0 = 0.0165).
3. PM determined using emission factors from WebFire using energy input
4. The following HAP emissions determined using emission factors from WebFire using energy input:

Benzene:	4.45 E-03 lb/MMBtu
Toluene:	5.23 E-03 lb/MMBtu
Xylenes:	1.30 E-03 lb/MMBtu
Formaldehyde:	5.40 E-03 lb/MMBtu
5. For Acetaldehyde and Acrolein, emissions estimated using the values from AP-42 Table 3.4-3, modified using factors from Table 3.4-1. The acetaldehyde factor is 2.82 E-05 lb/MMBtu, the non-methane TOC (NMTOC) factor is 0.2 lb/MMBtu. Dividing the former by the latter yields 0.000126 lb acetaldehyde/lb NMTOC. Acrolein is calculated likewise.
6. NMTOC determined using emission factor (0.2 lb/MMBtu) from AP-42 Table 3.4-1.
7. CO from 2021 testing, 0.282 lb/MMBtu
8. Worst-case diesel fuel emission factors from 40 CFR 98, Tables C-1 and C-2. Worst-case factors from Table A-1: CO₂: 1, CH₄: 25, NO_x: 298.

Magellan Pipeline Co., L.P. - Marshall Terminal
Potential to Emit - July 2022
Dual Fuel Engine

Emission Point No.	Hours of Operation [Hours/Year]	Engine HP	Energy Input [MMBtu/hr]	Energy Input MMBtu/yr	HAP Emissions					
					Benzene Emissions ¹ [CAS 71432] [0.0144 lb/MMBtu] [Tons/yr]	Toluene Emissions ² [CAS 10883] [0.0323 lb/MMBtu] [Tons/yr]	Xylenes Emissions ³ [CAS 131037] [0.0413 lb/MMBtu] [Tons/yr]	Acetaldehyde Emissions ⁴ [CAS 75070] [0.0462 lb/MMBtu] [Tons/yr]	Acrolein Emissions ⁵ [CAS 107028] [0.00019 lb/MMBtu] [Tons/yr]	
EQ0127EU00	0,760	810	7.35	53.85	0.14	0.16	0.04	0.17	0.00	0.00

NOTES

1. Non-methane TOC (NMTOC) determined using emission factor (0.2 lb/MMBtu) from AP-42 Table 3.4-1 using energy input.
2. SO_x determined from AP-42 Table 3.4-1 where S₁ = 0.35% in fuel oil, S₂ = 0% in natural gas, yielding a factor of 0.0165 lb/MMBtu for the SO_x emission factor (0.05*0.33+0.85*0 = 0.0165).
3. PM determined using emission factors from WebFire using energy input
PM Coarse: 7.7 E-03 lb/MM BTU
PM Fine: 7.2 E-02 lb/MM BTU
PM₁₀: 7.1 E-02 lb/MM BTU
PM_{2.5}: 4.79 E-02 lb/MM BTU
4. The following HAP emissions determined using emission factors from WebFire using energy input
Benzene: 4.45 E-03 lb/MMBtu
Toluene: 5.23 E-03 lb/MMBtu
Xylenes: 1.30 E-03 lb/MMBtu
Formaldehyde: 5.40 E-03 lb/MMBtu
5. For Acetaldehyde and Acrolein, emissions estimated using the values from AP-42 Table 3.4-3, modified using factors from Table 3.4-1. The acetaldehyde factor is 2.52 E-05 lb/MMBtu, the non-methane TOC (NMTOC) factor is 0.2 lb/MMBtu. Dividing the former by the latter yields 0.000126 lb acetaldehyde/lb NMTOC. Acrolein is calculated likewise.
Acetaldehyde: 1.28 E-04 lb/MMBtu
Acrolein: 3.94 E-05 lb/MMBtu
6. NO_x determined using emission factor (2.7 lb/MMBtu) from AP-42 Table 3.4-1.
7. CO from 2021 testing: 0.202 lb/MMBtu
8. Worst-case diesel fuel emission factors from 40 CFR 98 Table C-1 and C-2.
CO₂: 116.0 lb/MMBtu; CO: 1.0 lb/MMBtu; CH₄: 0.01 lb/MMBtu; NMHC: 0.01 lb/MMBtu

Magellan Pipeline Co., LP - Marshall Terminal
Potential to Emit - July 2022
Dual Fuel Engine

Emission Point No.	Hours of Operation (Hours/Year)	Engine HP (HP)	Exhaust Input (MMBtu/hr)	Energy Input (MMBtu/yr)	GHG Emissions			
					CO ₂ Emissions ^a [CAS 124389] [131 (54 lb/MMBtu)] [Tons/yr]	CH ₄ Emissions ^a [CAS 74620] [0.006 lb/MMBtu] [Tons/yr]	N ₂ O Emissions ^a [CAS 10024972] [0.019 lb/MMBtu] [Tons/yr]	CO ₂ -Emissions ^b [Tons/yr]
EQ0127 EU02	8,780	810	7.56	61,845	5,042.05	0.20	0.04	5,056.17

NOTES

1. Non-methane VOC (NMVOC) determined using emission factor (0.2 lb/MMBtu) from AP-42 Table 3.4-1 using energy input.
2. SOx determined from AP-42 Table 3.4-1 where $S_p = 0.33\%$ in fuel oil, $S_p = 0\%$ in natural gas, yielding a factor of 0.0165 lb/MMBtu for the SOx emission factor (0.0370, 0.33--0.8950 = 0.0155).
3. PM determined using emission factors from WebFire using energy input:
PM Can 7.7 E-03 lb/MM BTU
PM F6 2 E-02 lb/MM BTU
PM10 F6 4.36 E-02 lb/MM BTU
PM2.5 F6 4.79 E-02 lb/MM BTU
4. The following HAP emissions determined using emission factors from WebFire using energy input:
Benzene: 4.45 E-03 lb/MMBtu
Toluene: 5.23 E-03 lb/MMBtu
Xylenes: 1.30 E-03 lb/MMBtu
Formaldehyde: 5.40 E-03 lb/MMBtu
5. For Acetaldehyde and Acrolein, emissions estimated using the values from AP-42 Table 3.4-3, modified using factors from Table 3.4-1. The acetaldehyde factor is 2.52 E-05 lb/MMBtu, the non-methane VOC (NMVOC) factor is 0.2 lb/MMBtu. Dividing the former by the latter yields 0.000126 lb acetaldehyde/VOCs. Acrolein is calculated likewise.
Acetaldehyde: 1.23 E-04 lb/MMBtu
Acrolein: 3.94 E-05 lb/MMBtu
6. NOx determined using emission factor (2.7 lb/MMBtu) from AP-42 Table 3.4-1.
7. CO from 2021 testing: 0.282 lb/MMBtu
8. Worst-case diesel fuel emission factors from 40 CFR 98 Tables C-1 and C-2.
CO₂ factors from Table A-1; CO₂: 1, CH₄: 25, N₂O: 298.

Magellan Pipeline Co., LP - Marshall Terminal
Potential to Emit - July 2022
Tanks in Normal Operation, VOC Emissions

EU	Tank No.	Tank Type ¹	Diameter (ft)	Height (ft)	Capacity (gal)	Annual Turnovers	Potential Throughput		Most Volatile Product Stored	VOC Emissions			
							(gal/yr)	(gal/hr)		Standing (lb./yr)	Working (lb./yr)	Total (lb./yr)	Total (ton/yr)
IA	181	VFRT	25.00	25.00	84,000	104.00	8,736,000	997	Biodiesel	8	51	59	0.03
EQUI 4 / TK 001	427	IFRT	35.00	36.00	182,742	104.00	19,005,168	2,170	Denatured Ethanol	547	120	667	0.33
EQUI 5 / TK 002	670	IFRT	60.00	40.00	708,120	104.00	73,644,480	8,407	Gasoline RVP13	6,887	236	7,123	3.56
EQUI 6 / TK 003	671	IFRT	60.00	40.00	708,120	104.00	73,644,480	8,407	Jet Kerosene	9	295	304	0.15
EQUI 7 / TK 004	672	IFRT	60.00	40.00	708,120	104.00	73,644,480	8,407	Gasoline RVP13	7,438	236	7,674	3.84
EQUI 8 / TK 005	673	VFRT	60.00	40.00	814,632	104.00	84,721,728	9,671	Jet Kerosene	73	496	568	0.28
EQUI 9 / TK 006	674	IFRT	60.00	40.00	708,120	104.00	73,644,480	8,407	Gasoline RVP13	6,887	236	7,123	3.56
EQUI 10 / TK 007	675	IFRT	60.00	40.00	708,120	104.00	73,644,480	8,407	Jet Kerosene	8	295	303	0.15
EQUI 11 / TK 008	676	IFRT	60.00	40.00	708,120	104.00	73,644,480	8,407	Jet Kerosene	8	295	303	0.15
EQUI 12 / TK 009	758	VFRT	73.00	41.00	1,216,866	104.00	126,554,064	14,447	Jet Kerosene	113	736	849	0.42
EQUI 13 / TK 010	759	VFRT	73.00	41.00	1,216,866	104.00	126,554,064	14,447	Jet Kerosene	113	736	849	0.42
EQUI 14 / TK 011	Relief	VFRT	10.00	14.00	8,000	12.00	96,000	11	Gasoline RVP13	654	835	1,489	0.74
										22,745	4,566	27,311	13.66

NOTES

1. VFRT is Vertical Fixed Roof, IFRT is Internal Floating Roof, HFR is Horizontal Fixed Roof

Magellan Pipeline Co., LP - Marshall Terminal
 Potential to Emit - July 2022
 Tanks in Normal Operation, HAP Emissions

EU	Tank No.	HAP Emissions (lb/hr)						HAP Emissions (ton/yr)					
		2,2,4 TMP 0.80% of VOC	Benzene 0.90% of VOC	Ethylbenzene 0.10% of VOC	Hexane 1.60% of VOC	Toluene 1.30% of VOC	Total Xylenes 0.50% of VOC	2,2,4 TMP 0.80% of VOC	Benzene 0.90% of VOC	Ethylbenzene 0.10% of VOC	Hexane 1.60% of VOC	Toluene 1.30% of VOC	Total Xylenes 0.50% of VOC
IA	181	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EQUI 4 / TK 001	427	0.001	0.001	0.000	0.001	0.001	0.000	0.003	0.003	0.000	0.005	0.004	0.002
EQUI 5 / TK 002	670	0.007	0.007	0.001	0.013	0.011	0.004	0.028	0.032	0.004	0.057	0.046	0.018
EQUI 6 / TK 003	671	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.001	0.000	0.002	0.002	0.001
EQUI 7 / TK 004	672	0.007	0.008	0.001	0.014	0.011	0.004	0.031	0.035	0.004	0.061	0.050	0.019
EQUI 8 / TK 005	673	0.001	0.001	0.000	0.001	0.001	0.000	0.002	0.003	0.000	0.005	0.004	0.001
EQUI 9 / TK 006	674	0.007	0.007	0.001	0.013	0.011	0.004	0.028	0.032	0.004	0.057	0.046	0.018
EQUI 10 / TK 007	675	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.001	0.000	0.002	0.002	0.001
EQUI 11 / TK 008	676	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.001	0.000	0.002	0.002	0.001
EQUI 12 / TK 009	758	0.001	0.001	0.000	0.002	0.001	0.000	0.003	0.004	0.000	0.007	0.006	0.002
EQUI 13 / TK 010	759	0.001	0.001	0.000	0.002	0.001	0.000	0.003	0.004	0.000	0.007	0.006	0.002
EQUI 14 / TK 011	Relief	0.001	0.002	0.000	0.003	0.002	0.001	0.006	0.007	0.001	0.012	0.010	0.004
		0.025	0.028	0.003	0.050	0.041	0.016	0.109	0.123	0.014	0.218	0.178	0.068

NOTES

- HAP specification for normal gasoline from Table 3-2 of Gasoline Distribution Industry (Stage I) - Background Information for Proposed Standards, EPA-453/R-94-002a, January 1994.
- 2,2,4 TMP is 2,2,4 trimethylpentane.

Magellan Pipeline Co., L.P. - Marshall Terminal
Potential to Emit - July 2022
Tank Roof Landings

EU No.	Tank No.	Most Volatile Product Stored	VOC per Landing Event (lb./event)	Landing Events per Year	Roof Landing VOC (ton/yr)	Hazardous Air Pollutants (ton/yr)					
						2,2,4 TMP 0.80% of VOC	Benzene 0.90% of VOC	Ethylbenzene 0.10% of VOC	Hexane 1.60% of VOC	Toluene 1.30% of VOC	Total Xylenes 0.50% of VOC
EQUI 4 / TK 001	427	Gasoline RVP 13	118.13	3	0.18	1.42E-03	1.59E-03	1.77E-04	2.84E-03	2.30E-03	8.86E-04
EQUI 5 / TK 002	670	Gasoline RVP 13	347.14	3	0.52	4.17E-03	4.69E-03	5.21E-04	8.33E-03	6.77E-03	2.60E-03
EQUI 6 / TK 003	671	Gasoline RVP 13	347.14	3	0.52	4.17E-03	4.69E-03	5.21E-04	8.33E-03	6.77E-03	2.60E-03
EQUI 7 / TK 004	672	Gasoline RVP 13	347.14	3	0.52	4.17E-03	4.69E-03	5.21E-04	8.33E-03	6.77E-03	2.60E-03
EQUI 9 / TK 006	674	Gasoline RVP 13	347.14	3	0.52	4.17E-03	4.69E-03	5.21E-04	8.33E-03	6.77E-03	2.60E-03
EQUI 10 / TK 007	675	Gasoline RVP 13	347.14	3	0.52	4.17E-03	4.69E-03	5.21E-04	8.33E-03	6.77E-03	2.60E-03
EQUI 11 / TK 008	676	Gasoline RVP 13	347.14	3	0.52	4.17E-03	4.69E-03	5.21E-04	8.33E-03	6.77E-03	2.60E-03
Totals					3.30	0.03	0.03	0.003	0.05	0.04	0.02

NOTES

1. Emissions estimated using methods from AP-42 Section 7.1.3.2.2 TankESP, assuming two 3-day roof landings per tank occurring in April.
2. The roof-landings emissions-estimating spreadsheet is included with the permit application as a document separate from this PTE spreadsheet.
3. TMP is trimethylpentane.

Magellan Pipeline Co., L.P. - Marshall Terminal
Potential to Emit - July 2022
Tank Cleaning Events

EU No.	Tank No.	Most Volatile Product Stored	VOC per Vapor Space Purge Event (lb./event)	VOC per Forced Ventilation Event (lb./event)	Total Cleaning VOC (ton/yr)	Hazardous Air Pollutants (ton/yr)				
						2,2,4 TMP 0.80% of VOC	Benzene 0.90% of VOC	Ethylbenzene 0.10% of VOC	Hexane 1.60% of VOC	Toluene 1.30% of VOC
EQUI 4 / TK 001	670	Gasoline (RVP 13)	842.95	6,516.02	3.68	0.03	0.03	0.00	0.06	0.05
EQUI 5 / TK 002	672	Gasoline (RVP 13)	842.95	6,516.02	3.68	0.03	0.03	0.00	0.06	0.05
EQUI 6 / TK 003	674	Gasoline (RVP 13)	842.95	6,516.02	3.68	0.03	0.03	0.00	0.06	0.05
EQUI 7 / TK 004	673	Jet Kerosene	4.83	6,516.02	3.26	0.03	0.03	0.00	0.05	0.04
Totals			2,533.69	26,064.08	14.30	0.11	0.13	0.01	0.23	0.19

NOTES

1. Emissions estimated using methods from AP-41 Ch. 7.1 Eqn. 4-2 for vapor space purge events and Eqn. 4-10 for forced ventilation emissions.
2. The cleaning event emissions-estimating spreadsheet is included with the permit application as a document separate from this PTE spreadsheet.
3. TMP is trimethylpentane.
4. Conservatively estimating no more than 4 tanks will be cleaned in a given year. The 4 tanks calculated here represent the greatest emission generating tanks during a typical 2-day cleaning process.

Magellan Pipeline Co., LP - Marshall Terminal
Potential to Emit - July 2022
Small Tanks Potential to Emit

EU	Tank No.	Tank Type	Regulatory Status	Diameter (ft)	Height or Length (ft)	Capacity (gal)	Annual Tank Turnovers	Throughput (gal/year)	Most Volatile Product Stored	VOC Emissions			
AD-1	Additive Tank No. 1	HFR	Insignificant	5.33	18.00	3,000.00	12.00	36,000	Jet Naphtha	Standing (lb./year)	Working (lb./year)	Total (lb./year)	Total (ton/year)
AD-2	Additive Tank No. 2	HFR	Insignificant	6.00	10.33	2,000.00	12.00	24,000	Jet Naphtha	45.11	66.80	111.91	0.01
										32.42	44.53	76.95	0.01

HAP Emissions (lb./hr)										HAP Emissions (ton/yr)			
EU	Tank No.	2,2,4 TMP	Benzene	Ethylbenzene	Hexane	Toluene	Total Xylenes	2,2,4 TMP	Benzene	Ethylbenzene	Hexane	Toluene	Total Xylenes
AD-1	Additive Tank No. 1	0.80% of VOC 1.02E-04	0.90% of VOC 1.15E-04	0.10% of VOC 1.28E-05	1.60% of VOC 2.04E-04	1.30% of VOC 1.66E-04	0.50% of VOC 6.39E-05	0.80% of VOC 4.80E-04	0.90% of VOC 5.40E-04	0.10% of VOC 6.00E-05	1.60% of VOC 9.60E-04	1.30% of VOC 7.80E-04	0.50% of VOC 3.00E-04
AD-2	Additive Tank No. 2	7.03E-05 1.72E-04	7.91E-05 1.94E-04	8.78E-06 2.16E-05	1.41E-04 3.45E-04	1.14E-04 2.80E-04	4.39E-05 1.08E-04	3.20E-04 8.00E-04	3.60E-04 9.00E-04	4.00E-05 1.00E-04	6.40E-04 1.60E-03	5.20E-04 1.30E-03	2.00E-04 5.00E-04

NOTES

1. VFR is Vertical Fixed Roof, HFR is Horizontal Fixed Roof
2. HAP speciation for normal gasoline from Table 3-2 of Gasoline Distribution Industry (Stage 1) - Background Information for Proposed Standards, EPA-453/R-94-002a, January 1994.
3. TMP is trimethylpentane

Magellan Pipeline Co., L.P. - Marshall Terminal
Potential to Emit - July 2022
Equipment Fugitives

Component	Component Count	VOC Emission Factor per Component		VOC (ton/yr)	Potential HAP Emissions (ton/yr)					
		(kg/hr)	(lb/hr)		2,2,4 TMP 0.80% of VOC	Benzene 0.90% of VOC	Ethylbenzene 0.10% of VOC	Hexane 1.60% of VOC	Toluene 1.30% of VOC	Total Xylenes 0.50% of VOC
Valves, light liquid service	46	4.30E-05	9.48E-05	0.02	1.53E-04	1.72E-04	1.91E-05	3.06E-04	2.48E-04	9.55E-05
Valves, vapor service	0	1.30E-05	2.87E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pump seals, light liquid service	10	5.40E-04	1.19E-03	0.05	4.17E-04	4.69E-04	5.21E-05	8.34E-04	6.78E-04	2.61E-04
Pump seals, vapor service	0	6.50E-05	1.43E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fittings, light liquid service	390	8.00E-06	1.76E-05	0.03	2.41E-04	2.71E-04	3.01E-05	4.82E-04	3.92E-04	1.51E-04
Fittings, vapor service	0	4.20E-05	9.26E-05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other components, light liquid service	101	1.30E-04	2.87E-04	0.13	1.01E-03	1.14E-03	1.27E-04	2.03E-03	1.65E-03	6.34E-04
Other components, vapor service	0	1.20E-04	2.65E-04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				0.23	1.83E-03	2.05E-03	2.28E-04	3.65E-03	2.97E-03	1.14E-03

NOTES

1. All emission factors are from Table 2-3 of EPA Bulletin 453/R-95-017, *Protocol for Equipment Leak Emission Estimates*, November 1995
2. HAP speciation for normal gasoline from Table 3-2 of Gasoline Distribution Industry (Stage 1) - Background Information for Proposed Standards, EPA-453/R-94-002a, January 1994.
3. TMP is trimethylpentane.

Magellan Pipeline Co., LP - Marshall Terminal
 Potential to Emit - July 2022
 Summary of Potential VOC Emissions for Butane Unloading Station

Emissions Source	(ton/yr)			
	Truck Unloading	Sample Tee Purging	Maintenance	Total
Butane Station #1	0.40	0.02	0.05	0.47
Totals	0.40	0.02	0.05	0.47

Butane Unloading Emissions per Station

Potential emissions from butane-unloading are estimated using the following equation: $Maximum\ Hourly\ Emissions = V \cdot D \cdot E_H$

V = Hose volume (ft³)

Annual Emissions = $V \cdot D \cdot E_A$

D = Density of Butane (lb/gal)

E_A = Events per Year

E_H = Events per Hour

Emission Source	Diameter (in)	Length (ft)	Volume (ft ³)	Volume (gal)	Density (lb/gal)	Events per Year	Potential to Emit (ton/yr)
Butane Truck Unloading	2	1.50	0.03	0.245	5.06	650	0.40

Butane Sample Tee Purging Emissions per Station

Potential emissions from butane sample-tee purging are estimated using the following equation: $Maximum\ Hourly\ Emissions = V \cdot D \cdot E_H$

V = Tee volume (ft³)

The estimate is based on the following assumptions:

Purged tubing volume, ft ³	0.0177
Purges per hr	1
Purges per year	50
Maximum annual purge volume, ft ³ /yr	0.883

Volume (ft ³)	Volume (gal)	Density (lb/gal)	Potential to Emit (ton/yr)
0.0177	0.132	5.06	0.02

Butane Routine Maintenance Emissions per Station

Potential emissions from butane system maintenance are estimated using the following equation: $Maximum\ Hourly\ Emissions = V \cdot D \cdot E_H$

V = Hose volume (ft³)

Emission Source	Diameter (in)	Length (ft)	Volume (ft ³)	Volume (gal)	Density (lb/gal)	Events per Year	Potential to Emit (ton/yr)
Butane System Routine Maintenance	2	20.00	0.44	3.264	5.06	6	0.05

Magellan Pipeline Co., LP - Marshall Terminal
Potential to Emit - July 2022
Ethanol Unloading

Unloading pipe diameter	16.00	inches
Unloading pipe diameter	1.33	feet
Unloading pipe length	8.00	feet
Unloading pipe volume	11.17	ft ³
Volume loaded while pipe is venting	55.71	gallon/unloading-event
Maximum unloading tanker volume	8,000	gallon
Gasoline loading rate/limit	336,000,000	gallon/year
Max unloading rate (10% of gasoline rate)	33,600,000	gallon/year
Maximum number of trucks unloaded	4,200	trucks/year
Volume loaded while pipe is venting	233,962	1000-gallon/year
Molecular weight, M	48.86	lb/lb-mole
Saturation factor, S (AP-42 Table 5.2-1)	0.60	dimensionless
Vapor pressure of ethanol, P	1.51	psia
Mean temperature of liquid unloaded, T	63.22	°F
Loading loss factor L _v	1.05	lb. VOC/1000-gal-loaded
Potential VOC emissions from venting ethanol delivery pipe	246.40	lb./yr
	0.03	lb./hr
	0.12	ton/year

HAP Emissions

	2,2,4 TMP	Benzene	Ethylbenzene	Hexane	Toluene	Total Xylenes
Gasoline % of VOC	0.800%	0.900%	0.100%	1.600%	1.300%	0.500%
Denatured Ethanol % of VOC	0.016%	0.018%	0.002%	0.032%	0.026%	0.010%
Potential HAP Emissions (ton/yr)	1.97E-05	2.22E-05	2.46E-06	3.94E-05	3.20E-05	1.23E-05
Potential HAP Emissions (lb./hr)	4.50E-06	5.06E-06	5.63E-07	9.00E-06	7.31E-06	2.81E-06

NOTES

1. Denatured ethanol includes up to 2% gasoline as denaturant. Therefore, potential HAP fractions are 2% of those used for gasoline.
2. TMP is trimethylpentane.

Magellan Pipeline Co., LP - Marshall Terminal
Potential to Emit - July 2022
Biodiesel Unloading

Potential emissions from bio-diesel unloading are estimated using the following equation: *Maximum Annual Emissions* = $V \cdot D \cdot E$

V = Volume Emitted per Disconnect (gal)

D = Density of Bio-diesel Fuel (lb/gal)

E = Events per Year

Emission Source	V (gal)	D (lb/gal)	E (events/yr)	VOC	
				(lb/yr)	(ton/yr)
Bio-diesel Truck Unloading	0.00130208	7.00	1000	9.11	0.00

HAP Fractions of VOC

Pollutant	HAP Fraction of VOC ⁽¹⁾	Potential HAP Emissions (ton/yr)
2,2,4 Trimethylpentane	0.008	3.646E-05
Benzene	0.009	4.102E-05
Ethyl Benzene	0.001	4.557E-06
Hexane	0.016	7.292E-05
Toluene	0.013	5.924E-05
Total Xylenes	0.005	2.279E-05

Notes:

(1) Conservatively, HAP speciation for normal gasoline from Table 3-2 of Gasoline Distribution Industry (Stage I) - Background Information for Proposed Standards, EPA-453/R-94-002a, January 1994.

Magellan Pipeline Co., LP - Marshall Terminal
Potential to Emit - July 2022
VCU Greenhouse Gases

Physical Properties and Emissions Factors

Fuel Combusted in VCU	Liquid Density (lb./gal)	High Heating Value (HHV)		GHG Emissions Factors (ton/MMBtu)			GHG Emissions Factors (lb./MMBtu)		
		(MMBtu/gal)	(MMBtu/ft ³)	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
Gasoline	6.20	0.125		0.0709	3.10E-06	6.01E-07	156.3078	0.0068	0.0013
Natural gas			1.020E-03	0.0531	9.50E-07	9.50E-08	117.0655	0.0021	0.0002

Greenhouse Gases from Combusting Fuel Vapors in the VCU

Fuel Combusted	Weight of Vapors Combusted (ton/yr)	Liquid Volume of Vapors Combusted (gal/yr)	Energy of Vapors Combusted (MMBtu/yr)	CO ₂ (ton/yr)	CH ₄ (ton/yr)	N ₂ O (ton/yr)
Gasoline vapor	1,253.43	404,332	50,542	3,950.02	0.17	3.35E-02

Greenhouse Gas Emissions from Combusting Natural Gas in the VCU Pilot

Fuel Combusted	Volume of Gas Combusted ² (ft ³ /yr)	Energy of Gas Combusted (MMBtu/yr)	CO ₂ (ton/yr)	CH ₄ (ton/yr)	N ₂ O (ton/yr)
Natural gas	525,600.00	536	31.38	5.61E-04	5.61E-05

Total Greenhouse Gas Emissions

Pollutant	PTE-Mass Basis (ton/yr)	Global Warming Potential	PTE- CO ₂ e (ton/yr)
CO ₂	3,981.40	1.00	3,981.40
CH ₄	0.17	25.00	4.33
N ₂ O	0.034	298.00	9.99
Totals	3,981.60		3,995.72

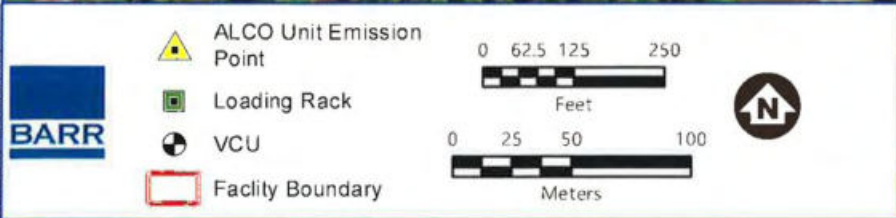
NOTES

1. Emission Factors and heating values from Tables 4-3 and 4-5 of *Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry*, Aug. 2009.
2. Based on data from the VCU manufacturer of continuous feed of 1 scfm for the VCU pilot.
3. Global Warming Potential values from Table 3-1 of *Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry*, Aug. 2009.

Attachment 2

Ambient Air Quality Analysis

Barr Footer: ArcGIS 10.8.1, 2021-07-12 15:17 File: \\Client\Magellan Midstream\Work Orders\Marshall_23071040\Map\Capped Air Permit\Figure 1 Facility Boundary Diagram 1.mxd User: MACE



FENCE LINE DISTANCES FOR EMISSION POINTS
Capped Air Permit Eligibility Evaluation
Magellan Pipeline Co LP – Marshall
Magellan Midstream Partners, L.P.
Marshall, MN

FIGURE 1

Attachment 1 CAPS Spreadsheet

Yellow cells = required inputs (for each stack/vent considered-inputs not required for unused stacks)
 White cells = optional inputs
 All other cells locked

Screening Date:	6/21/2022
AQ Facility ID No.:	08300007
Facility Name:	Magellan Pipeline Co LP - Marshall
Facility Location:	Marshall, MN
Address:	1601 W College Dr
Address (cont'd)	Marshall, MN 56258

Criteria Pollutant Screening Results Table				
Chemical	Fraction of 1-hr std	Fraction of 3-hr std	Fraction of 24-hr std	Fraction of annual std
SO ₂	0.001	0.001	0.001	0.001
NO ₂				0.420
PM ₁₀			0.007	0.005

Emissions	Optional stack description >>>	Stack(s)#1	Stack(s)#2	Stack(s)#3	Stack(s)#4	Stack(s)#5	Stack(s)#6	Stack(s)#7
Pollutant Name		VCLU	ALCO Unit					
	Total annual emissions (tpy)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)	Hourly Emissions (lb/hr)
SO ₂	0.51	0	0.12	0.51				
NO ₂	89.63	5.14	83.49					
PM ₁₀	1.77	0	0.35	1.77				

Default Dispersion Factors	notes	Stack(s)#1	Stack(s)#2	Stack(s)#3	Stack(s)#4	Stack(s)#5	Stack(s)#6	Stack(s)#7
Stack height (1-99 m)	required for lookup	13.81	10.67					
Distance to property line (10-10,000 m)	required for lookup	110.78	61.75					
1-hr dispersion factor	automatic lookup	1500	3267					
3-hr dispersion factor	automatic lookup	1041	2292					
24-hr dispersion factor	automatic lookup	302	767					
Annual dispersion factor	automatic lookup	35	91					
Optional Specific Dispersion Factors	notes	Stack(s)#1	Stack(s)#2	Stack(s)#3	Stack(s)#4	Stack(s)#5	Stack(s)#6	Stack(s)#7
1-hr dispersion factor	enter dispersion factors manually	2137	61.52					
3-hr dispersion factor	enter dispersion factors manually	1923.3	55.368					
24-hr dispersion factor	enter dispersion factors manually	854.8	24.608					
Annual dispersion factor	enter dispersion factors manually	170.96	4.9216					

*Optional specific dispersion factors refers to dispersion factors developed via an external method such as the DISPERSE batch process, the SCREEN3 model or other screening or refined air dispersion modeling. After developing the dispersion factors they are entered manually on this sheet. If the optional specific dispersion factors are filled in, they are used preferentially over the Default Dispersion Factors lookup table values above.

08/06/21
10:18:49

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 13043 ***

C:\Users\AER\Desktop\Marshall Caps Screening.scr

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	1.00000
STACK HEIGHT (M)	=	10.6680
STK INSIDE DIAM (M)	=	0.3048
STK EXIT VELOCITY (M/S)	=	11.6425
STK GAS EXIT TEMP (K)	=	672.0389
AMBIENT AIR TEMP (K)	=	293.0000
RECEPTOR HEIGHT (M)	=	1.5000
URBAN/RURAL OPTION	=	RURAL
BUILDING HEIGHT (M)	=	0.0000
MIN HORIZ BLDG DIM (M)	=	0.0000
MAX HORIZ BLDG DIM (M)	=	0.0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

STACK EXIT VELOCITY WAS CALCULATED FROM
VOLUME FLOW RATE = 0.84950459 (M**3/S)

BUOY. FLUX = 1.496 M**4/S**3; MOM. FLUX = 1.373 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
62.	61.52	1	3.0	3.0	960.0	20.28	17.62	9.25	NO
100.	100.0	1	3.0	3.0	960.0	20.28	26.99	14.22	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 62. M:									
147.	107.2	2	2.5	2.5	800.0	22.21	27.72	15.63	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

*** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC		DIST TO		TERRAIN	
	(UG/M**3)		MAX (M)		HT (M)	
SIMPLE TERRAIN	107.2		147.		0.	

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

08/06/21
14:48:18

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 13043 ***

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SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	1.00000
STACK HEIGHT (M)	=	13.8074
STK INSIDE DIAM (M)	=	2.2860
STK EXIT VELOCITY (M/S)	=	0.0039
STK GAS EXIT TEMP (K)	=	418.9833
AMBIENT AIR TEMP (K)	=	293.0000
RECEPTOR HEIGHT (M)	=	1.5000
URBAN/RURAL OPTION	=	RURAL
BUILDING HEIGHT (M)	=	0.0000
MIN HORIZ BLDG DIM (M)	=	0.0000
MAX HORIZ BLDG DIM (M)	=	0.0000

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

STACK EXIT VELOCITY WAS CALCULATED FROM
VOLUME FLOW RATE = 0.15851283E-01 (M**3/S)

BUOY. FLUX = 0.015 M**4/S**3; MOM. FLUX = 0.000 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
111.	2137.	4	1.0	1.0	320.0	7.84	9.02	5.09	NO
200.	1495.	4	1.0	1.0	320.0	7.84	15.57	8.50	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 111. M:

111.	2137.	4	1.0	1.0	320.0	7.84	9.02	5.09	NO
------	-------	---	-----	-----	-------	------	------	------	----

DWASH= MEANS NO CALC MADE (CONC = 0.0)
DWASH=NO MEANS NO BUILDING DOWNWASH USED
DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

*** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	2137.	111.	0.

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
