



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1201 ELM STREET, SUITE 500
DALLAS, TEXAS 75270

June 14, 2023

Ms. Gwen Ricco
Office of Legal Services
Texas Commission on Environmental Quality (MC 205)
Post Office Box 13087
Austin, Texas 78711-3087

RE: Non Rule Project Number 2022-033-OTH-NR

Dear Ms. Ricco:

EPA provides the attached comments for consideration regarding the proposed amendments to the Non-Rule Air Quality Standard Permit for Concrete Batch Plants for issuance under the Texas Clean Air Act, Texas Health and Safety Code §382.05195, Standard Permit and 30 Texas Administrative Code Chapter 116, Subchapter F, Standard Permits.

If you have any questions, please contact our Air Permits Section Manager, Cynthia Kaleri at (214) 665-6772, or Aimee Wilson at (214) 665-7596.

Sincerely,

Jeff Robinson
Branch Manager
Air Permits, Monitoring, and Grants Branch

Enclosure

ENCLOSURE

Summary:

EPA appreciates the opportunity to review the amendments to the Concrete Batch Plant (CBP) Standard Permit (SP) and the modeling performed to support the protectiveness review. EPA also appreciates that TCEQ has provided an extended comment period and performed additional public outreach in Harris County. Based on our review, we have identified some additional improvements that could be made to the standard permit to ensure that these facilities remain in compliance with their permit terms and emission limitations.

Modeling and Protectiveness Review:

1. EPA appreciates that TCEQ performed an updated protectiveness review as part of the standard permit amendment proposal. It is important that TCEQ reevaluate the protectiveness review for rule and non-rule actions especially when these actions occur at irregular intervals and there are changes in either the attainment status or in the National Ambient Air Quality Standards. EPA would advise TCEQ to perform additional modeling and complete a secondary protectiveness review in order to take into consideration the EPA's January 6, 2023 proposal¹ to revise the primary (health based) annual PM_{2.5} standard from its current level of 12.0 µg/m³ to within the range of 9.0 to 10.0 µg/m³. This revision to the NAAQS could result in eight counties in Texas being potentially considered as non-attainment for PM_{2.5}: Bowie, Cameron, Dallas, Harris, Hidalgo, Tarrant, Travis, and Webb counties. For improved transparency, TCEQ should commit to a timely reevaluation of the protectiveness review in the event the standard is finalized prior to adoption of the standard permit. In addition, EPA notes that within the supporting modeling data provided with TCEQ's public notice of the standard permit amendment, the document titled "draft_results.xlsx" suggests that a downward revision to the annual PM_{2.5} NAAQS may have a material effect on required setback distances. For example, the draft results for Region 14 indicate that in the event the annual PM_{2.5} NAAQS is lowered to 10 µg/m³, the setback distance may be extended to a minimum of 500 feet for all operating scenarios between 100 and 300 yd³/hr with or without partial enclosure (compared to currently proposed 100' setback w/ partial enclosure and 200' setback without partial enclosure). Likewise, the same tables suggest that the Region 14 setback distance could extend to beyond 1,000' for all operating scenarios if the annual PM_{2.5} NAAQS is lowered to 9 µg/m³. Because the currently proposed setback distances are based on the current standards, EPA encourages TCEQ to ensure that the CBP SP will continue to be protective of the NAAQS if the PM_{2.5} standard is revised in the near future.
2. The updated protectiveness review was conducted using the ISCST3 model (Version 02035). Please note that ISCST3 is no longer EPA's preferred air dispersion model. The AERMOD modeling system was formally adopted as the preferred dispersion modeling in November 2005, replacing ISC3. AERMOD incorporates more current state-of-the-art modeling techniques that replace the antiquated model algorithms contained in ISC3. Specifically, AERMOD contains new or improved algorithms for: 1) dispersion in both the convective and stable boundary layers; 2) plume rise and buoyancy; 3) plume penetration into elevated

¹ See, <https://www.govinfo.gov/content/pkg/FR-2023-01-27/pdf/2023-00269.pdf>

inversions; 4) computation of vertical profiles of wind, turbulence, and temperature; 5) the urban nighttime boundary layer; 6) the treatment of receptors on all types of terrain from the surface up to and above the plume height; 7) the treatment of building wake effects; 8) an improved approach for characterizing the fundamental boundary layer parameters; and 9) the treatment of plume meander. For these reasons, we believe that AERMOD is a more appropriate modeling system for modeling potential impacts from emissions authorized by the CBP SP and recommend that the protectiveness review of the permit is reevaluated using EPA's preferred dispersion model (AERMOD).

3. The protectiveness review modeling was conducted using 5 years (1983, 1984, 1986, 1987 and 1988) of meteorological input data from the Austin surface station and the Victoria upper air station. The modeling report includes a statement that "this five-year data set would include worst-case short-term meteorological conditions that could occur anywhere in the state." However, no analysis or data evaluation appears to be included to substantiate this statement. Please provide additional information in the record to support this statement. The modeling report also does not include an explanation of why more recent meteorological data was not used in the protectiveness review nor does it include any evaluation of the representativeness of a dataset that is nearly 40 years old. We suggest that the protectiveness review utilize more recent meteorological data or, at a minimum, that TCEQ provide additional information to justify the use of the older meteorological data in terms of data availability and representativeness compared to more recent meteorological data.
4. To determine cumulative impacts in the protectiveness review, modeled impacts from the concrete batch plant emission sources were combined with a background ambient concentration. Based on our review, it does not appear that any additional off-site emission sources were included in the cumulative analysis. Further, it does not appear that the requirements of the amended standard permit include any proximity limitations regarding multiple concrete batch plants located nearby each other. The protectiveness review should be updated to evaluate and account for possible overlap of impacts of multiple concrete batch plants authorized under the standard permit located in close proximity to each other to fully demonstrate that cumulative impacts from the amended CBP SP will not lead to violations of the NAAQS and/or state health effects levels, or cause nuisance level impacts on local residents and businesses.
5. The modeling report indicated that the modeled fugitive emissions represented by source group FUG included "material handling activities, truck loading, and stockpiles." It is not clear from the modeling report if the modeled fugitive emissions also account for the emissions of particulate matter from on-site roads. Please clarify how road emissions were accounted for in the modeling analysis included in the protectiveness review.
6. The modeling analysis included a single point source to represent emissions from baghouses and a single point source to represent emissions from internal combustion engines. Based on our review of the amended standard permit, it does not appear that the permit restricts an authorized concrete batch plant to only one baghouse and only one internal combustion engine. EPA requests that TCEQ clarify for the record how the current modeling analysis

demonstrates compliance with applicable NAAQS and state health effects levels when more than one baghouse and/or more than one internal combustion engine is present at a facility.

7. The protectiveness review was updated to include a state health effects analysis evaluating the modeled impacts of Ni, CHOH, and SiO₂ for comparison with their corresponding effects screening levels (ESLs). EPA requests that TCEQ clarify if emissions authorized by the concrete batch plant standard permit may contain additional substances found on TCEQ's current ESL list (e.g., fly ash, cement) and if those substances were also included the state health effects analysis as part of the protectiveness review.

Proposed Standard Permit:

8. TCEQ has added a definition for "setback distance". Setback distance is defined in the standard permits as "the minimum distance from the nearest suction shroud fabric/cartridge filter exhaust and/or engine to any property line". EPA finds that this addition helps to clarify the ambiguity in the term. Will TCEQ be referencing this definition when making determinations on affected person status under Texas Health and Safety Code Sec. 382.058(c)? EPA has concerns that the point within the CBP used for determination of the 440 yard radius is not consistent from project to project, nor is it consistent between the TCEQ Executive Director and the TCEQ Office of Public Interest Counsel (OPIC). This is evident in the case of the Rhino Ready Mix LLC Concrete Batch Plant. *See* TCEQ Docket No. 2021-1465-AIR.² Clarifying how the agency measures distance would provide more transparency and clarity on determinations of a person's rights before the commission.
9. EPA understands why TCEQ added a requirement that all sand and aggregate should be washed prior to delivery to the facility, but questions if this is consistently achievable. As a practical matter, did TCEQ obtain any data on the availability of prewashed sand or aggregate? What assurance can be made to verify that each load of sand and aggregate received has been washed prior to delivery? What degree of washing should be performed? Is there a minimum number of screens to be used by the aggregate wash plant and a maximum screen size? How will TCEQ enforce the requirement to obtain prewashed aggregate? EPA suggests that the standard permit include explicit recordkeeping requirements to assist in the enforceability of this requirement.
10. EPA requests that TCEQ provide justification for the control and capture efficiency assumptions that are made in the protectiveness review for flexible curtains and shrouding requirements. The standard permit at (8)(E) requires the use of a flexible curtain at the suction shroud to achieve a 99% capture efficiency. EPA requests that TCEQ provide detailed justification for the assumed capture efficiency. The protectiveness review states that the installation of an enclosure for truck mix operations that consists of three sides around the truck loading area extending from the ground level to at least three feet above the truck provides an 85% control efficiency. Can TCEQ provide justification for allowing an assumption of 85% control efficiency for such three-sided shrouding? The standard permit

² TCEQ, Rhino Ready Mix LLC Concrete Batch Plant Standard Permit Registration 162413, Docket No. 2021-1465-AIR (November 22, 2021), (Office of Public Interest Counsel's Response to Hearing Requests and Requests for Reconsideration) pp. 6-10.

technical background also includes an enclosed percent control for specialty plants of 90%. Can TCEQ verify if this control is applicable to condition (10)(C)(ii) and (iii) in the standard permit? EPA requests that TCEQ provide the basis for this level of control. Absent sufficient justification for the assumed capture/control efficiencies, EPA does not agree that the setback distance should be allowed to be lowered to 100 ft when a CBP installs a three-sided enclosure for truck mix operations.

In addition, the modeling results for the Region 15 (Cameron and Hidalgo Counties) 300 yd³/hr with partial enclosure operating scenario show a 24-hour PM_{2.5} predicted + background concentration of 34.96278 µg/m³ at 200 feet. EPA notes that this concentration is 99.9% of the 24-hour PM_{2.5} NAAQS. An increase of just four hundredths of a microgram in the 24-hr PM_{2.5} concentration (e.g., slightly higher background concentration) would result in a modeled violation of the NAAQS at the property line based on the proposed 200-foot setback distance. EPA strongly encourages TCEQ to increase the alternative setback requirement for the 300 yd³/hr scenario in Table 3 for Cameron and Hidalgo counties to at least 300 feet.

11. TCEQ allows the installation of dust suppression fencing or other barrier to be installed as a border around roads and other traffic and work areas. The installation of such barriers as specified under condition 8(I) allows a site to avoid the buffer distance requirements in condition 8(H). Dust suppression fencing is typically made from a polypropylene cloth material and comes in a range of options that have varying degrees of privacy blockage or aerodynamic porosity which impacts the ability of wind and particulate matter to pass through the barrier³. The barrier fencing is made in a variety of ways and can come coated in vinyl and other materials that can prolong the life of the material. A review of literature online found that some barrier fencing is intended for use for 3 – 5 years under ideal conditions⁴ and others can be used in applications lasting 8 – 10 years⁵. A review of literature also indicates that barrier fencing can develop a buildup of dust that can impact the effectiveness and can cause damage to the barrier fencing itself if the load becomes too great. The barrier fencing can be washed, but it must be done properly and with care to prevent damage to the fencing. The standard permit should specify parameters for which the barrier fencing must comply with for its design. In addition, the standard permit should require regular inspection of the barrier fencing, regular cleaning at a specified interval, and replacement of any barrier material on a specified schedule to ensure proper effectiveness of the barrier fencing at suppressing dust.
12. In addition to engineering controls for dust suppression, EPA suggests that TCEQ require all CBPs to install fenceline PM_{2.5/10} sensors or monitors. The technical background document for the CBP amendment indicates that stockpile emissions for PM_{2.5} and PM₁₀ are based on an assumption that PM₁₀ is 50% of PM. TCEQ based this assumption on the Background Document for Revisions to Fine Fraction Ratios Used for AP-42 Fugitive Dust Emission Factors (Chapter 13.2). However, EPA cannot find such referenced information in the

³ See, <https://www.weathersolve.com/our-resources/fabric-information-for-windbreak-windfence/>

⁴ See, <https://www.fencescreen.com/Fence-Privacy-Screen-Netting/200-Series-Privacy-Screen-Plus.aspx>

⁵ See, <https://www.fencescreen.com/Fence-Privacy-Screen-Netting/350-series-tight-hybrid-mesh.aspx>

document. TCEQ needs to identify and provide reference to where such assumptions can be found. Fugitive dust emissions from CBP are one of the biggest complaints that EPA hears about. TCEQ should revise condition 5(H) to require daily visible emissions observations. These fugitive emissions are not allowed by the standard permit, yet they are reported regularly by the public. PM sensors are a readily available and are an inexpensive tool that could be used to support compliance and minimize nuisance complaints. Such sensor data could be used as an early indicator of potential operational issues at the facility and to compel an operator to promptly document and respond to potential operational issues in a timely manner. We believe fenceline monitoring should be strongly considered for any existing source already located adjacent to residential neighborhoods, and that new sources should implement fenceline sensor/monitoring data as well with the data being reported to TCEQ and the data being made available to the public through TCEQ's Records Online database.

13. EPA encourages the TCEQ to include a requirement that all CBPs must be inspected through unannounced inspections by TCEQ or the local air control agency at regular intervals (at least every 24 months) to ensure compliance with the standard permit. The inspection should evaluate the condition of barrier fencing, shrouding, roads, equipment operation, and compliance with any other best management practices employed at the facility. Inspectors should review the complaint history (if relevant) with the operator and discuss what actions have been taken to ensure they are operating in a manner to reduce complaints from the community.
14. EPA appreciates that TCEQ made the recommendation to increase the minimum setback distance for CBP in some counties as shown in Table 1 of the proposed CBP SP. However, most counties remain at the 100 ft setback distance, and as mentioned above, it does not appear that TCEQ explicitly considered cumulative impacts in the determination of these setback distances. TCEQ should consider cumulative impacts and also consider the proposed change to the PM_{2.5} NAAQS when determining the setback distance for each county. TCEQ should consider extending the setback distance for neighboring counties to discourage the migration of CBP from a county with a 200 or 300 ft setback distance to a neighboring county with a 100 ft setback distance. Relying on a minimum 100 ft setback distance alone does not appear to be adequate to address quality of life impacts a CBP may have on adjacent residents and businesses. EPA conducted a review of concrete batch plant general permits across the US and found that the setback distance requirements varied widely, with some states having more stringent requirements and some not having any setback distance limitations.⁶ In addition to setback distances, EPA encourages TCEQ to also impose a minimum distance limitation that ensures the protection of human health and one that will minimize local air quality concerns at the neighborhood level for any new CBP where an adjacent property may be used as a single or multifamily residence, school, nursing home, or place of worship. We also believe TCEQ should exercise its discretion to deny CBP permits if that assurance cannot be demonstrated by the applicant or if TCEQ has significant

⁶ For example, the Mississippi CBP general permit requires that all sources of air emissions must be at least 150 feet from the nearest residential or recreational area. (<https://www.mdeq.ms.gov/wp-content/uploads/2020/12/Ready-Mix-Concrete-General-Permit.pdf>) and Iowa has a concrete batch plant permit by rule that states a CBP must maintain a distance of 1,000 feet from another concrete batch plant, any aggregate processing plant, or any hot mix asphalt facility. (See: <https://www.iowadnr.gov/Portals/idnr/uploads/forms/5420954.pdf>)

concerns about an area being overburdened or disproportionately impacted with air emission sources. TCEQ should also exercise the same denial authority at renewal if a source has a demonstrated record of causing air quality concerns and/or nuisance concerns for local citizens. Once again, we strongly recommend that TCEQ explore requiring fenceline sensors and/or monitoring for PM_{2.5} and PM₁₀ emissions for existing facilities already located adjacent to residential neighborhoods, businesses, schools, daycares, or places of worship and that data be maintained and available to TCEQ and EPA for inspection.

15. Quality of life can be significantly impacted by nuisance conditions caused by CBPs. Nuisance conditions are not allowed under 30 TAC 101.4 which states, “No person shall discharge from any source whatsoever one or more air contaminants or combinations thereof, in such concentration and of such duration as are or may tend to be injurious to or to adversely affect human health or welfare, animal life, vegetation, or property, or as to interfere with the normal use and enjoyment of animal life, vegetation, or property”. EPA is concerned that the track record for CBP complaints indicate that these facilities routinely allow potentially offensive levels of PM emissions to migrate beyond the property line of the facility. Complaints also indicate that there are issues with noise and light pollution that often persist during the night hours. When present, these potential nuisance conditions appear to impact residents’ quality of life and may interfere with the normal use and enjoyment of their property, nearby parks, schools, and other outdoor public spaces. TCEQ should take into consideration the siting of concrete batch plants within residential communities and the impact to the quality of life for residents living near them. TCEQ should offer practical solutions to prevent nuisance conditions from occurring and ensure that those seeking coverage under the standard permit are implementing its requirements continuously. For example, TCEQ could impose additional restrictions to avoid nuisance conditions by ensuring that CBPs in or immediately adjacent to residential areas are not operating from dusk to dawn, and by imposing requirements, as practicable, to reduce the noise and traffic during the day. TCEQ should not only restrict the hours of operation for facilities in or immediately adjacent to residences, but also incorporate lighting restrictions for these facilities during the night hours to avoid light pollution into nearby homes.
16. EPA also requests that TCEQ include a requirement that concrete batch plants notify TCEQ within 30 days of ceasing operations so that the permit can be voided. This issue was highlighted in the Sunset Advisory Commission Report and stated “Trying to establish which concrete batch plants are still active when performing inspections wastes staff time and effort. Without updated data on which regulated entities are currently in operation, TCEQ field staff cannot establish accurate inspection schedules, and members of the public do not have access to reliable information about regulated activity in their area.”⁷

Public Involvement:

17. It is important that TCEQ ensure that community engagement and public participation actions be consistent with federal civil rights law, which require that no person shall be

⁷ See Sunset Advisory Commission Report pages 38-39 of Issue 2. Available at https://www.sunset.texas.gov/public/uploads/2022-05/Texas%20Commission%20on%20Environmental%20Quality%20Staff%20Report_5-25-22.pdf

excluded on the basis of race, color, national origin, or other prohibited grounds from participation in any program or activity receiving EPA financial assistance. EPA has developed the Environmental Justice and Civil Rights in Permitting Frequently Asked Questions to assist with addressing these issues.⁸ Having a public involvement plan that addresses measures to perform enhanced public outreach can be beneficial to some permitting actions. The paid circulation of daily weekday newspapers in the United States has dropped significantly over the past 30 years. While it was once common for nearly every household to receive a daily newspaper, today this is rare for a variety of reasons. For those that can afford it, many pay to receive digital online access of their local and national newspapers. The large drop in distribution of newspapers has caused the price for home delivery of newspapers to rise which has resulted in lower income families cancelling their subscriptions. Newspaper notices are no longer an effective resource if used as the sole method for communicating public notices for air permits. Online notices are more effective, but not everyone has internet access and online distribution is sporadic across different social media platforms. Therefore, EPA encourages TCEQ to utilize other potentially more effective forms of notification, e.g., notifications through the postal mail service. Every home receives mail and there is no direct cost to the homeowner to receive mail. TCEQ should require that facilities send out a mass mailer informing communities of any proposed CBP operation. The mailer could be done through the USPS presorted standard mail option. Presort mail would allow the mailer to be delivered to every home located within the zip code in which the CBP is to be located. These options would ensure that every person that could potentially be affected by the operation of the CBP would be notified of the proposed facility and of their opportunity to participate in the public commenting process. If a public meeting or hearing is held, a mass mailer should also be done.

Environmental Justice and Civil Rights:

18. EPA has been informed of the various environmental justice and civil rights concerns with the siting of new Concrete Batch Plants from communities across Texas. Executive Order 12898, directed each listed federal agency to make “achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.”⁹ Executive Order 14008, made explicit that federal agencies should address “climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts.”¹⁰ Provisions requiring that cumulative impacts be identified and addressed in a permit decision is one way to help ensure fair treatment of all communities affected by government decisions all represent a fairer distribution of environmental burdens and benefits. As mentioned within the EPA EJ and Civil Rights FAQs, permitting programs should carefully review applicable authorities for opportunities to incorporate environmental

⁸ <https://www.epa.gov/system/files/documents/2022-08/EJ%20and%20CR%20in%20PERMITTING%20FAQs%20508%20compliant.pdf>

⁹ Exec. Order No. 12898, 59 F.R. 7629 (1994)

¹⁰ Exec. Order No. 14008, 86 F.R. 7619 (2021)

justice considerations and to ensure that such considerations are adequately and appropriately incorporated into permitting decisions.¹¹

EPA is committed to advancing environmental justice and incorporating equity considerations into all aspects of our work. TCEQ should require that all applications for a CBP include an Environmental Justice Analysis. We encourage TCEQ to screen permitting actions for EJ concerns and to consider potential compliance issues related to civil rights of the communities potentially impacted early in the permitting process by utilizing EJScreen and knowledge of the impacted area. This screening will indicate whether a permitting decision has the potential to contribute to significant public health or environmental impacts, if the community may be particularly vulnerable to impacts from the proposed permit, and whether the community is already disproportionately impacted either by public health or environmental burdens. A sound screening practice will also provide important information as to whether there are residents of the affected community who could be disproportionately subjected to adverse health, environmental and/or quality of life impacts on the basis of income, national origin (including LEP status), or other demographic factors. TCEQ should also take into consideration other permitted facilities in the area, including whether these facilities are major or minor sources of pollution and contribute to community risk. An area with an above average number of sources, especially if those sources are large or in close proximity to residents, is a sign of concern.

EJ and civil rights compliance are complementary, however civil rights compliance is not equal to compliance with the environmental laws and regulations and should be considered by the TCEQ as a distinct part of its regulatory obligation. The civil rights regulations prohibit state, local, or other entities that receive federal financial assistance, either directly or indirectly from EPA (recipients) from taking actions that are intentionally discriminatory as well as practices that have an unjustified discriminatory effect, including on the bases of race, color, or national origin. Integrating environmental justice in decision making and ensuring compliance with civil rights laws can, together, address the strong correlation between the distribution of environmental burdens and benefits and the racial and ethnic composition, as well as the income level of communities.

EPA is currently investigating two formal Title VI complaints filed with the EPA Office of External Civil Rights Compliance (OECRC) related to Concrete Batch Plants located in Harris County. Please note that the above comments are separate from any actions or comments related to the above referenced Title VI complaints. Further, we preserve the right to address additional civil rights concerns under the ongoing civil rights process in order to resolve those complaints.

¹¹ See EPA EJ and Civil Rights in Permitting - Frequently Asked Questions. August 22. <https://www.epa.gov/system/files/documents/2022-08/EJ%20and%20CR%20in%20PERMITTING%20FAQs%20508%20compliant.pdf>