



June 22, 2021

Mr. David Munzenmaier
Air Permits Division
Texas Commission on Environmental Quality
12100 Park 35 Cir
Austin, TX 78753
Via email to david.munzenmaier@tceq.texas.gov

Subject: CBP SP Amendment Registration for 2021-016-OTH-NR

Mr. Munzenmaier,

We appreciate the opportunity to provide comments on the amendment to Air Quality Standard Permits for Concrete Batch Plants (CBPs), 2021-016-OTH-NR. However, we would like to begin our remarks by objecting to the opaque public communication strategy the agency has taken with regard to the proposed changes as well as the brevity of the public comment period for such an unexpected and technically complex permit revision. Inadequate communication on the part of TCEQ effectively prevents considerate and meaningful public participation in the environmental decision making process for most affected stakeholders. As such, we would like to request an extension of the public comment deadline to no less than 60 days following the June 28th public meeting in order to ensure that all stakeholders have the opportunity to make informed comments about the proposed changes to the standard permit.

Over the last decade, Air Alliance Houston and our partner organizations have opposed the siting of concrete batch plants in residential neighborhoods and among the places people live, worship, and play throughout Greater Houston. In our region, these permits are invariably applied for in communities of color and working class neighborhoods – places where urban land is devalued and residents are thought not to possess the social and political capital to effectively resist a permit application. There are over 180 CBPs in Harris County, and hundreds of households are located in close proximity to one or several of these facilities. In many cases, small-lot single family residences literally share a property line with these facilities.

In meeting after meeting, concerned residents have been led to believe that the conflicts surrounding various CBP permit applications were not the result of an overly permissive permitting process. Instead, the conflicts were implicitly or sometimes explicitly attributed to a dense urban environment with no municipal zoning requirements, the inevitable and necessary consequence of urban development, or supposed misunderstandings regarding the potential impact to public health and safety. Communities were assured that the standard permit, as written, was protective of people's health. While many communities lack the legal and technical

expertise to refute these claims in a manner that would satisfy the TCEQ, common sense informed most residents that a concrete batch plant would be an unwelcome burden to the health and safety of their neighborhood.

In recent years, our organization has become aware that this is not just an issue in the urban core of Houston or the sprawling exurban neighborhoods of unincorporated Harris County. Residents across the state – from the environmental justice communities of our infamously unzoned Houston, to rural retiree communities in unincorporated Hill Country land, and small-towns in North Texas whose land use planning code couldn't anticipate industrial/residential land use conflicts – have found the requirements of the CBP standard permit to be incompatible with maintaining the quality of life and health that they expect and that is the right of all Texas communities.

The administrative law judge's findings in the Bosque Solutions case revealed what many affected communities have known intuitively: the CBP Standard Permit couldn't consider all of the adverse impacts of living with a concrete batch plant in your neighborhood and still be approved.

In the Bosque Solutions case, the attorney representing the citizen's group in the contested case hearing successfully argued that the omission of crystalline silica from consideration in the standard permit violated the effective screening levels (ESL) standards set out in 30 TAC § 106.261 and .262(a)(2) which preclude the issuance of a standard permit for facilities with the potential to emit compounds with a developed Effects Screening Level (ESL) value that is listed in the TAC with a value less than 200 mg/m³ or the 1997 American Conference of Governmental Industrial Hygienists (ACGIH) time weighted average (TWA) threshold limit value (TLV) that is less than 200 mg/m³. For crystalline silica, the administrative judge in the Bosque Solutions case cited the 1997 ACGIH TLV, which is just 0.1 mg/m³ (100 µg/m³) and based her recommendation to deny the permit on the conflict between that value and the rules outlined in the TAC.

Our understanding of the permit revision proposed by the TCEQ is that rather than complying with the rule laid out in the Texas Administrative Code, the TCEQ is seeking to exempt the standard permit from compliance with this rule and thereby allow the agency to avoid the consideration of crystalline silica emissions in the permitting process for the majority of CBPs permitted to operate in the state. According to the agency, this was the standard prior to 2012 when the language exempting the consideration of crystalline silica emissions was somehow inadvertently removed from the standard permit requirements.

The question, then, is why the agency now believes that removing the consideration of crystalline emissions from the standard permit is protective of the environmental health of Texans? Crystalline silica is a known inhalation hazard that can lead to silicosis, an irreversible, progressive, and fatal lung disease, and the International Agency for Research on Cancer (IARC)

has classified crystalline silica as "carcinogenic to humans" since 1996.¹ Since the 1996 IARC designation, the body of evidence regarding the hazardous health effects of crystalline silica has expanded considerably, and more protective exposure thresholds have been established, accordingly.

Even the 1997 ACGIH TLV value cited by the administrative law judge in the Bosque Solutions case - while well below the threshold outlined in 30 TAC § 106.261 and .262(a)(2) - represents an outdated occupational exposure threshold that doesn't reflect the most protective values relevant to community exposure in a residential environment. The 1997 ACGIH value is four times higher than the most recent TLV for crystalline silica developed by ACGIH in 2012, which is 25 $\mu\text{g}/\text{m}^3$.²

The TCEQ's own ESL and Air Monitoring Comparison Values (AMCV), while not reflected in the TAC, are even lower than the most recent ACGIH value. In fact, the TCEQ ESL and AMCV long-term exposure value for crystalline silica - a value that is most reflective of the conditions that may be experienced by a resident living in close proximity to a permanent CBP - is **just 0.27 $\mu\text{g}/\text{m}^3$** .³

According to a September 24, 2012 TCEQ interoffice memorandum obtained by the UT School of Law's Environmental Clinic (attached), the modeling result for a CBP with 30 cu. yd./hour (262,800 cu.yd/year) capacity estimates the average annual concentration of PM₁₀ to be 8.48 $\mu\text{g}/\text{m}^3$ at a distance of 500 feet from CBP emission points. Some proportion of these PM₁₀ emissions can be assumed to be crystalline silica, which is generally understood to be a component of several raw materials processed by CBPs. If just 3.2% of those PM₁₀ emissions can be attributable to crystalline silica, the emissions would exceed the long-term AMCV values of 0.27 $\mu\text{g}/\text{m}^3$ for this pollutant; a value the TCEQ has developed as an evaluative air monitoring value intended to protect human health and welfare.

It is uncertain what proportion of a CBP's overall emissions are attributable to crystalline silica, but it is known to be abundantly present in many of the materials used in concrete production such as sand, cement, aggregates, and fly ash. While the exact proportion of crystalline silica present in concrete materials is difficult to estimate, the UK Health and Safety Executive has estimated that the crystalline silica content of concrete and mortar may be anywhere between 25-70%.⁴ To our knowledge, a representative emissions rate for respirable crystalline silica as a component of overall CBP particulate emissions has not been established, however. Given the uncertainties surrounding this issue, the substantial concerns of

¹ IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, No. 68. IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. Lyon (FR): International Agency for Research on Cancer; 1997. <https://www.ncbi.nlm.nih.gov/books/NBK410027/>

² ACGIH TLVs and BEIs: Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices. 2012

³ [TAMISWeb v5.0 ESL query](#)

⁴ *Control of exposure to silica dust - A guide for employees*, UK Health and Safety Executive, 2013 <https://www.hse.gov.uk/pubns/indg463.pdf>

communities throughout the state, and the rapid development of environmental health research since these rules were first developed, we strongly urge the TCEQ to conduct a more comprehensive protectiveness review of concrete batch plant emissions using the most recent and best available science including, but not limited to, representative material sampling and analysis, air dispersion models, and fence-line and community monitoring adjacent to existing facilities. We feel that rigorous scientific study is crucial to ensure the protection of the health and safety of Texas communities and that the transparent design and execution of such a study would provide an opportunity for TCEQ to begin addressing the fraught reputation and the erosion of trust felt among many communities with regard to the commission - to the extent that the commission values such relationships.

Until or unless such a protectiveness review is conducted and made publicly available, we would urge the TCEQ to **declare a moratorium on the issuance of the standard permit for concrete batch plants**. In the interim, we believe an appropriate compromise would be to apply the requirements outlined in the standard permit with enhanced controls to all future concrete batch plant permits not otherwise requiring a new source review (NSR). We would like to emphasize that this suggestion is largely based on the importance our organization places on the 440 yard buffer to nearby residences required in the enhanced controls permit as well as similar distance requirements to sensitive receptors outlined in the permit requirements for concrete and rock crusher facilities. We feel that the incorporation of a similar setback requirement in the CBP standard permit could greatly mitigate most of the unintended health and safety impacts associated with these facilities and help alleviate many of the concerns of Houston-area communities.

In addition to the issues we have outlined regarding the proposed crystalline silica exemption, we would like to make the following suggestions for consideration in the revision of the air quality standard permit.

The implementation of setback distances from residences and other sensitive land uses is a relatively common practice in other states. Many state setback requirements are greater than those of the Texas standard permit. These range from Mississippi's 150 foot buffer to New Mexico's 0.25 mile evaluation distance.^{5,6} Other states like Idaho undertake a more flexible approach, differentiating setback distances based on the magnitude of daily and yearly concrete production limits.⁷ TCEQ's proposed one-size-fits-all approach to setback buffers should be expanded to provide greater distances separating emission sources from sensitive receptors such as residences, schools and childcare facilities, parks, and healthcare facilities. Setback buffers should also more fully consider the physical configuration of a facility's equipment,

⁵ [Mississippi Department of Environmental Quality \(MDEQ\), Ready-Mix Concrete General Permit \(RMCGP\).](#)

⁶ [New Mexico Environment Department, Air Quality Bureau, General Construction Permits \(GCPs\) for Crusher/Screening, Asphalt and Concrete Batch Plants](#)

⁷ Personal correspondence with Darrin Pampaian, Air Quality Permit Supervisor, Idaho Department of Environmental Quality

stockpile, and haulage routes as well as operational factors such as production capacity and operating hours.

TCEQ's CBP permitting process should comprehensively account for other pollutants not currently addressed within the standard permit as well. These include crystalline silica but also heavy metals such as arsenic, chromium, nickel and iron that already contribute to the PM generated from a CBP but induce significantly worse health impacts even at low concentrations. Idaho's DEQ provides a model for mitigating this through its implementation of a 30 meter (98 ft) buffer between emission release points of arsenic and chromium and the closest point of potential public access to limit human exposure and the related health effects it may bring⁸.

Other states also provide a model for the inclusion of vehicle and haulage emissions - significant sources of emissions that are inherent to CBP processes yet are not considered in the TCEQ standard permit. These emissions should be accounted for due to their contribution to fugitive PM emissions and airborne dust that disperses far beyond the property line. Haul routes and access roads must therefore be considered emission sources, adequately accounted for within the standard permit, and controlled appropriately through good management and maintenance practices as well as best available control technology. In doing so, TCEQ would be joining New Mexico, Mississippi, Iowa, Arizona, Illinois, North Carolina, West Virginia, and the environmental departments of several other states that account for vehicular contributed fugitive emissions within their permitting.⁹

The congregation of several concrete batch plants lacking adequate separation distances represents another issue for nearby residents who must now deal with cumulative impacts from emissions, noise, truck traffic, and numerous other nuisances issues. The co-location of CBPs with other industrial air pollution sources, especially those in residential areas - and particularly in communities that experience health inequities - must be subject to additional requirements to ensure the combination of their activities do not overburden communities. These may include similar, colocated industries being classified and permitted as a single stationary source with appropriate combined daily production limits, additional monitoring requirements, or separation distances like both the Idaho DEQ and Iowa DNR's 1,000 ft buffer from another concrete batch plant, hot mix asphalt plant, or rock crushing plant. It would be additionally beneficial to conduct a more holistic review of existing industrial facilities and other major emissions sources already cumulatively burdening residences within the surrounding area during the permitting process as well.¹⁰ This would ensure that the addition of a concrete batch plant (or multiple co-located plants) does not degrade neighboring communities' quality of life beyond its existing burdened condition.

⁸ Ibid.

⁹ Permit reviews and personal correspondence with various state environmental staff.

¹⁰ Personal correspondence with Michael Hermsen, Senior Engineer, Iowa Department of Natural Resources.

Finally, there are several significant environmental externalities that currently receive no consideration in the air quality standard permit that should nevertheless be addressed by the TCEQ in the permitting process. These include noise and light pollution, infrastructural damage to local roadways, the potential for roadway safety issues related to increased heavy truck traffic and material spills, and the impact of CBPs operations and material runoff on local flooding and drainage issues.

We contend that there are many areas for improvement in the current concrete batch plant standard permit that don't require exemptions for hazardous air pollutants from the requirements outlined in the TAC, and we ask that the suggestions we have outlined here are given full consideration for inclusion in any proposed revision of the permit. Maintaining the status quo permitting environment by reinstating an exemption that ignores the risk of a known carcinogen is a regressive action that doesn't consider the current state of environmental health science and cannot be considered to be in the best interest of public health and safety. As written, the proposed permit revision represents a significant missed opportunity to improve the quality of life and public health and safety of Texas - particularly when considering the overwhelming amount of conflict and consternation that these facilities cause for communities throughout the state.

We ask that the TCEQ study the full impact of these facilities more holistically and provide a more substantive permit revision that minimizes impacts to the quality of life and health of Texas communities and places the concerns of Texas residents over the convenience of the concrete and construction industry.

Sincerely,

A handwritten signature in black ink that reads "Corey Williams". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Corey Williams
Policy and Research Director
Air Alliance Houston