Sarah Utley

Please see attached comment letter.

OFFICE OF THE
HARRIS COUNTY ATTORNEY
CHRISTIAN D. MENEFEE

June 14, 2023

Via Electronic Submission
Gwen Ricco
Office of Legal Services, MC 205
Texas Commission on Environmental Quality
P.O. Box. 13087
Austin, Texas 78711-3087

Re: Harris County's Comments on Proposed Amendments to the Air Quality Standard Permit for Concrete Batch Plants; TCEQ Non-Rule Project No. 2022-033-OTH-NR

Dear Ms. Ricco,

Harris County, Texas (Harris County or the County) appreciates the opportunity to submit the following comments to the Texas Commission on Environmental Quality (TCEQ) on its proposed amendments to the Air Quality Standard Permit for Concrete Batch Plants (CBP Standard Permit).

Batch Plants in Harris County

With more than 4.71 million residents and spanning over 1,777 square miles, Harris County, Texas is the nation's third-largest county and home to the nation's largest petrochemical complex—the Houston Ship Channel. As a consequence of proliferating industry, Harris County has many sources of pollution, which are a source of major concern for the County and its many residents. More concrete batch plants (CBPs) operate here than anywhere else in the State and they tend to concentrate in minority and low-resource communities – areas that are already overburdened with particulate matter (PM). While Harris County is currently designated as "unclassifiable/attainment" for course PM (PM_{10}) and fine PM ($PM_{2.5}$) National Ambient Air Quality Standards (NAAQS), the area has long been considered "at-risk" for PM nonattainment and will likely be classified as nonattainment should the Environmental Protection Agency (EPA) adopt the newly proposed $PM_{2.5}$ NAAQS. A 2006 Report from the Houston Mayor's Task Force on the Health Effects of Air Pollution identified that the nine Houston "super neighborhoods" along the Houston Ship Channel, which contain several majority Black and/or Latino neighborhoods, were "far more vulnerable to health risks than others in Greater Houston" on "the basis

of location alone." The study noted that, in addition to the proximity to a large concentration of industry and point sources for air pollution, four major highways intersected the area.[1]

As a majority-minority county, Harris County is home to a great amount of diversity. The County's residents speak over 100 languages and approximately a quarter of them are foreign born. Unfortunately, many low-resource and minority residents reside in one of our environmental justice communities. The typical environmental justice community in the County experiences flooding risk, concentrated industrial operations, elevated poverty rates, and overrepresentation of minority racial and ethnic groups, and may include linguistically isolated communities. There are many CBPs in environmental justice communities throughout the County. In the maps below, note the relatively low number of CBPs in west Harris County—an area with lower concentrations of racial and ethnic minorities, people living below the poverty line, and lower levels of $PM_{2.5}$ —when compared to the rest of the County.

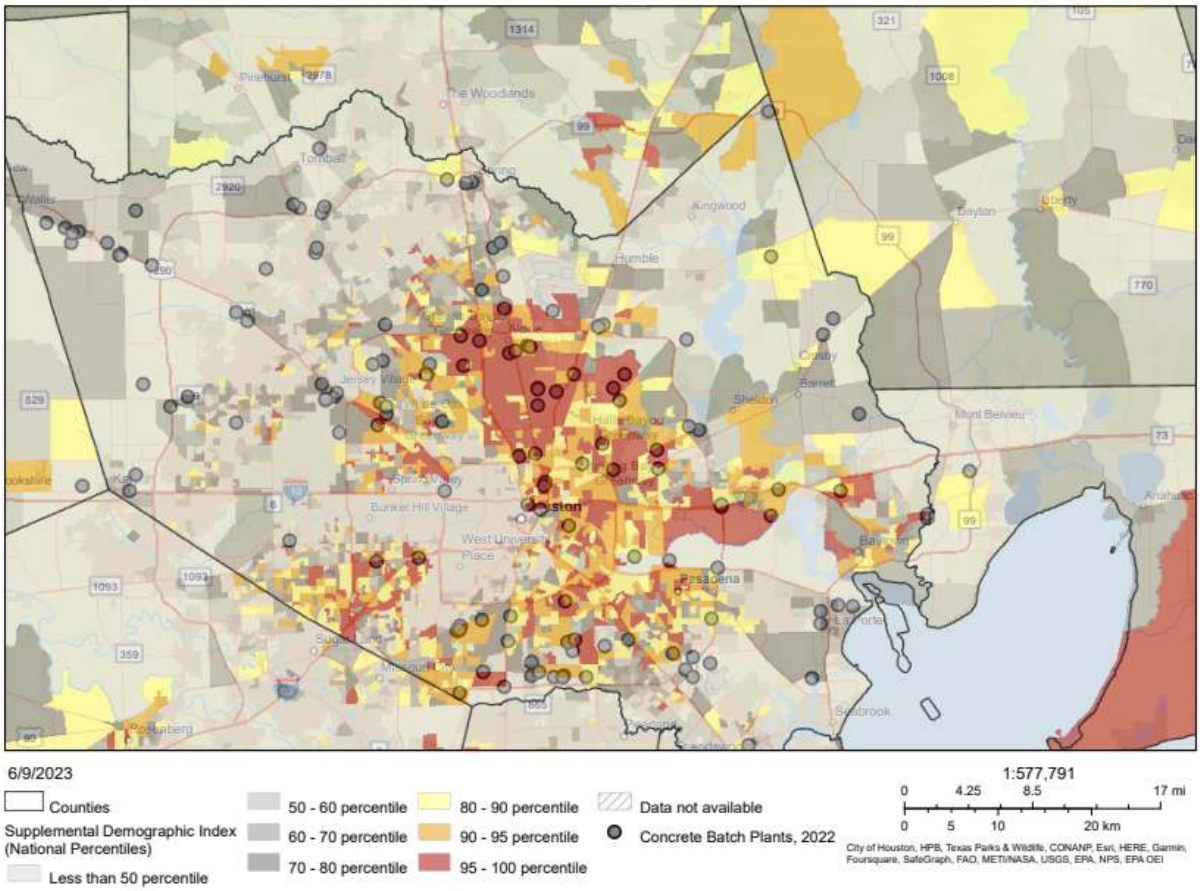

Figure 1: EJ Screen map of concrete batch plants located in Harris County overlaid with EPA's Supplemental Demographic Index, a combined socioeconomic index accounting for five factors: low income, unemployment, limited English, less than high school education, and low life expectancy.

[1] A Closer Look at Air Pollution in Houston: Identifying Priority Health Risks, 21 (2006) http://www.greenhoustontx.gov/reports/UTreport.pdf

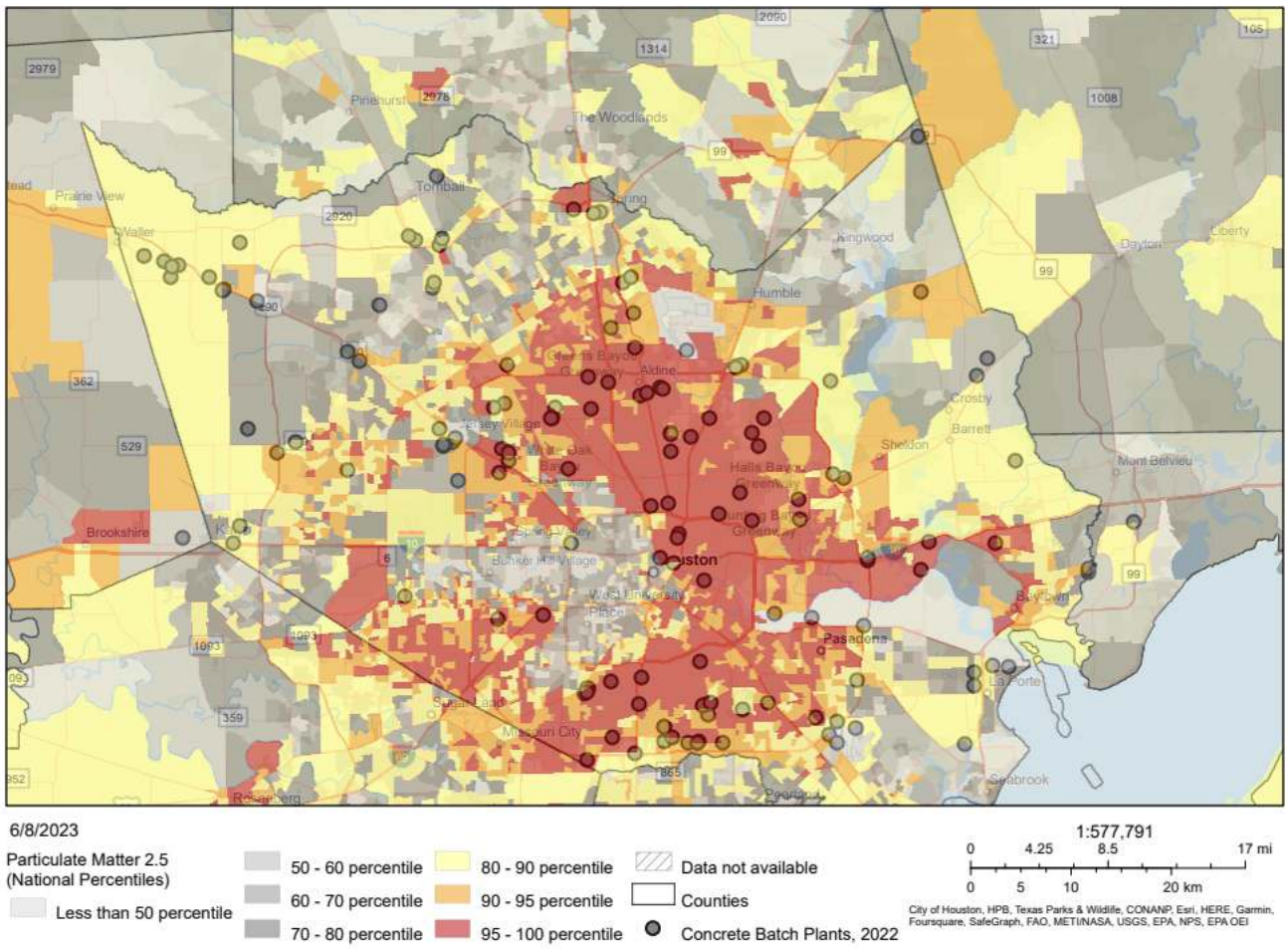

Figure 2: EJ Screen Map of the concrete batch plants in Harris County overlaid with the annual average of $PM_{2.5}$ levels.

Settegast, a neighborhood in northeast Houston, is an example of a Harris County environmental justice community impacted by PM.[2] The neighborhood was developed as a planned community in the 1940s and was advertised specifically to African-Americans, who populated the neighborhood.[3] It was annexed by the City of Houston in 1949, but despite annexation nearly 20 years prior, a 1966 report noted that the neighborhood had no city water, no sanitary sewers, and no drainage facilities at that time.[4] Community members have long voiced concern regarding air pollution in the area,[5] and a $PM_{2.5}$

[2] *Super Neighborhoods, Super Neighborhood 50 – Settegast,* https://www.houstontx.gov/superneighborhoods/50.html (last visited Mar. 20, 2023).
[3] *Id.*; Rafael Longoria & Susan Rogers, The Rurban Horseshoe, Rice Design Alliance, 20 (2008) http://offcite.org/wp-content/uploads/2009/10/Cite_73_Rurban_Horseshoe_LongoriaRogers.pdf; Protected Landmark Designation Report, City of Houston, 2 (2021) https://www.houstontx.gov/planning/Commissions/docs_pdfs/A_7977%20TATE%20ST.%20PL%20NOMINATION.pdf
[4] Luis Guarjardo, *Settegast: A case study in endemic racism within Houston's housing system*, Rice Kinder Inst. Urb. Rsrch., (Jul. 2, 2020) https://kinder.rice.edu/urbanedge/settegast-case-study-endemic-racism-within-houstons-housing-system.
[5] Fern Uennatornwaranggoon, *Houston may exceed national standards for harmful fine particulate matter, new monitoring shows,* Env't Defense Fund, (May 4, 2022) https://globalcleanair.org/monitoring/houston-may-exceed-national-standards-for-harmful-fine-particulate-matter-new-monitoring-shows/.

monitor was deployed in the Settegast neighborhood in summer of 2021 on North Wayside Drive (Wayside Monitor). The Wayside Monitor has continuously given high readings — the highest in the County. For the nearly 9 months of 2021 it was installed (May 3 – December 31), the annual mean was 12.7 μg/m^3. The annual mean for the 2022 calendar year was 11.8 μg/m^3. The mean for January 2023 was 12.4 μg/m^3, the mean for February 2023 was 12.1 μg/m^3, and the annual mean for 2023 as of March 20th is 13.4 μg/m^3.[6]

The area within a 5-mile radius of the Wayside Monitor is 96% people of color, 60% low income, and in the 98th Percentile of the U.S. for the $PM_{2.5}$ EJ Index. There are 2 Superfund sites from the National Priority List and 14 Hazardous Waste Treatment, Storage, and Disposal Facilities in the area. Nearby sources of $PM_{2.5}$ include concrete batch plants.

EPA United States Environmental Protection Agency

EJScreen Report (Version 2.11)
5 miles Ring Centered at 29.828284,-95.284038
TEXAS, EPA Region 6
Approximate Population: 197,785
Input Area (sq. miles): 78.53
5 Mile Radius from Wayside Monitor

Selected Variables	Percentile in State	Percentile in USA
Environmental Justice Indexes		
Particulate Matter 2.5 EJ Index	95	98
Ozone EJ Index	63	54
Diesel Particulate Matter EJ Index*	97	95
Air Toxics Cancer Risk EJ Index*	95	98
Air Toxics Respiratory HI EJ Index*	95	97
Traffic Proximity EJ Index	84	88
Lead Paint EJ Index	91	91
Superfund Proximity EJ Index	95	97
RMP Facility Proximity EJ Index	81	90
Hazardous Waste Proximity EJ Index	93	89
Underground Storage Tanks EJ Index	88	92
Wastewater Discharge EJ Index	89	92

EJ Indexes - The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator

Figure 3: Environmental Justice Indexes for the area within a five-mile ring of Wayside Monitor

Harris County Concerns with 2021 CBP Standard Permit Amendment

In 2021, the TCEQ amended the CBP Standard Permit after a successful challenge to an application for a CBP Standard Permit registration. During TCEQ's administrative process to amend the CBP Standard Permit, Harris County raised concerns with the permit and 2012 protectiveness review including: (1) a complete lack of modeling data to support exempting CBPs from the crystalline silica emission limit; (2) failure to demonstrate how the permit will meet current air quality standards for PM; (3) TCEQ's failure to assess cumulative impacts from multiple pollution sources (including multiple CBPs in close proximity); (4) failure to account for background concentrations of PM; (5) failure to provide notice and information of the amendment in Spanish; and (6) TCEQ's failure to assess proper emission control technologies. Unfortunately, the finalized 2021 amendment of the CBP Standard Permit (2021 CBP Standard Permit) did not address any of Harris County's concerns. In

[6] *Daily Mean Values for Calendar Year 2022, Houston-Galveston-Brazoria, CAMS 405 Houston North Wayside C405/C1033*, TCEQ, https://www.tceq.texas.gov/cgi-bin/compliance/monops/24hr_annual.pl (last visited Mar. 20).

response, Harris County filed a Petition for Review in the Travis County District Court seeking review and reversal of the issuance of the 2021 CBP Standard Permit.

Due to our concerns with the 2021 CBP Standard Permit, Harris County appreciates the TCEQ re-assessing the protectiveness review (2023 Protectiveness Review) and proposing new amendments to the CBP Standard Permit (Proposed CBP Standard Permit). While the TCEQ does propose some improvements to the CBP Standard Permit, including reducing the hourly production rate of a single CBP to 200 yd^3/hour and requiring an increase in setback distances to 200 feet, these proposed amendments and 2023 Protectiveness Review do not fully address all public health and general welfare concerns at CBPs. For example, the 2023 Protectiveness Review lacks detailed information regarding emission control factors and underestimates emissions. Harris County's specific concerns with the Proposed CBP Standard Permit and 2023 Protectiveness Review are provided below.

Community Engagement and the Proposed CBP Standard Permit

Harris County appreciates TCEQ providing an extended 60-day comment period on the Proposed CBP Standard Permit and 2023 Protectiveness Review, providing an informational meeting in Houston, and posting some of the supporting documents, including the modeling files for the protectiveness review, on a publicly available website[7] (TCEQ CBP Amendment Website). However, Harris County has concerns regarding meaningful community engagement related to the Proposed CBP Standard Permit and 2023 Protectiveness Review.

CBP Standard Permit should be available in Spanish

The Proposed CBP Standard Permit is only available in English, which excludes Limited English Proficient (LEP) persons. Under Title VI of the Civil Rights Act of 1964, and as a federal funding recipient, TCEQ must provide LEP persons with equal access to its programs and activities. Approximately 20% of Harris County residents speak English "less than very well," with Spanish being the most common language spoken at home, according to the U.S. Census Bureau. By only providing the Proposed CBP Standard Permit Amendment in English, the TCEQ excluded LEP Harris County residents from the amendment process.

A June 2021 snapshot shows that there are over 100 concrete batch plants in Harris County spanning over 50 zip codes. Harris County reviewed U.S. Census Bureau data regarding LEP populations in these zip codes, a summary is provided below.

Zip code	% of the Population 5 years and over that speaks English less than "very well"	Number of plants

[7] https://www.tceq.texas.gov/permitting/air/newsourcereview/2023-amendment-concrete-batch-standard-permit

77002	N/A	1
77011	N/A	1
77022	N/A	1
77026	N/A	2
77028	N/A	3
77041	N/A	5
77081	N/A	1
77091	N/A	1
77093	N/A	2
77484	N/A	2
77530	N/A	1
77039	66%	3
77038	57%	1
77060	55%	2
77036	52%	1
77086	40%	3
77587	35%	1
77087	35%	1
77055	28%	1
77029	27%	1
77040	26%	4
77032	26%	1
77035	24%	1
77034	24%	3
77066	24%	2
77045	21%	3
77073	20%	3
77084	20%	1
77449	19%	2
77477	19%	2
77503	18%	1
77064	18%	2
77520	18%	2
77075	16%	1
77078	16%	2
77471	15%	1
77598	14%	2
77433	14%	2

77447	14%	6
77493	14%	3
77521	13%	1
77396	13%	4
77079	12%	1
77505	10%	1
77375	10%	5
77429	10%	2
77373	9%	2
77389	9%	1
77047	7%	3
77532	7%	1
77049	6%	3
77051	6%	2
77571	6%	2
77048	6%	9
77007	4%	1

Of the 117 facilities that Harris County could locate in 2021, 32 (or 27%) are sited in zip codes where LEP people make up 20% or more of the population. That is a large percentage of the Harris County population that requires having the 2023 Proposed Amendment translated into Spanish to fully understand its terms. Furthermore, in the County's experience, there are a significant number of Spanish-speaking concrete batch plant operators. Translation of a single permit could enhance compliance with the permit at numerous facilities and offer surrounding LEP residents an opportunity to truly understand CBP operations.

TCEQ Public Meeting

On May 18, 2023, the TCEQ held a public meeting to present the Proposed CBP Standard Permit and 2023 Protectiveness Review and take public comment.[8] According to the TCEQ notice, the meeting would be a hybrid meeting with both virtual and in-person attendance and be "structured for the receipt of oral or written comments by all interested persons.[9] Unfortunately, technical issues hindered participation for those attending virtually in two significant ways. First, virtual attendees were unable to fully hear TCEQ responses to questions during the first part of the meeting. Second, due to a technical glitch, virtual attendees were unable to provide oral comments. In fact, the only virtual attendee who managed to provide oral comments did so when an in-person attendee held a cell phone to the

[8] TCEQ May 18, 2023 Public Meeting notice - https://www.tceq.texas.gov/downloads/permitting/air/nsr/nsr-stakeholders/22033-oth-nr-cbpsp23-5-pn-en.pdf.

[9] *Id.*

microphone in Austin. Any interested person that attended the May 28, 2023 meeting was not able to meaningfully participate in the public meeting.

TCEQ Informational Meeting

On May 22, 2023, the TCEQ held an informational meeting in Houston's Aldine Community. Unfortunately, the date and time of this meeting was not included in the TCEQ public notice on the Proposed CBP Standard Permit, nor did TCEQ take public comment on the Proposed CBP Standard Permit at the meeting.[10] TCEQ's decision to not take public comment at a meeting that was already occurring and provided translation, was clearly a source of frustration for members of the public in attendance, as many provided comments along with their questions. This is particularly concerning given the technology issues for in-person attendees at the May 18, 2023, TCEQ public meeting. The end result is the only interested persons who were able to submit oral comments are those that attended the Austin meeting in person. Accordingly, Harris County requests that TCEQ provide an additional public meeting that allows for oral comments – both in-person and virtually. To do otherwise for a permit with statewide applicability excludes interested people from meaningful public participation.

Harris County Pollution Control Services Department

The CBP Standard Permit is important to the County because there are over 140 operational CBPs in the County, over 70% of which are authorized under the CBP Standard Permit, and many have compliance issues. Additional batch plants have been authorized by the TCEQ, but do not appear operational at this time. Like TCEQ, the Harris County Pollution Control Services Department (Pollution Control), the Harris County department responsible for enforcing environmental regulations, also has the authority to enforce state environmental statutes, rules, and orders – this includes the CBP Standard Permit. Pollution Control has expended considerable taxpayer resources to inspect and bring CBPs in the County into compliance with the CBP Standard Permit. Better permit terms would reduce the workload of TCEQ, Pollution Control, and other local pollution control agencies across the state.

Pollution Control receives numerous complaints from residents living near CBPs. Complaints include vehicles covered in dust, off-site tracking of material, the inability to enjoy the use of the property, and the triggering of health conditions. The large number of CBPs, the high level of community concern about compliance with TCEQ rules and regulations, and the potential health impacts from particulate matter resulted in Pollution Control investigations of all Harris County CBPs. Since January 1, 2020, Pollution Control has conducted 313 concrete batch plant investigations and issued a total of 172 violation notices. Due to the heightened community concern about batch plant operations, Pollution Control developed a website to keep the public informed regarding Pollution Control's efforts; the website can be found at: https://pcs-harriscounty.hub.arcgis.com/pages/cbp-story-map. Pollution Control investigations address all environmental media, but the most observed CBP Standard Permit violations include the following:

[10] *Id.*

1) Failure to pave all entry, exit, and main traffic routes associated with the operation of the concrete batch plant with a cohesive hard surface that can be maintained intact and shall be cleaned. 2021 CBP Standard Permit, ¶9(F);

2) For Facilities that do not meet the buffer distance requirements for roads and stockpiles in subsection (8)(D), failure to contain stockpiles with a three-walled bunker that extends at least two feet above the top of the stockpile. 2021 CBP Standard Permit, ¶8(E);

3) Failure to shelter the drop point by an intact three-sided curtain, or equivalent dust control technology that extends below the mixer truck receiving funnel for truck mix plants. 2021 CBP Standard Permit, ¶9(C);

4) Failure to immediately clean up spilled materials. 2021 CBP Standard Permit, ¶5(G);

5) Failure to minimize dust emissions by containing, and dampening spill materials. 2021 CBP Standard Permit, ¶5(G); and

6) Failure to keep and maintain written records on-site for: (a) road cleaning, application of road dust control, or road maintenance for dust control; (b) stockpile dust suppression; (c) silo warning device for shut-off systems tests; and (d) quarterly visible emissions observations and any corrective actions required to control excess visible emissions. 2021 CBP Standard Permit, ¶3(J)(vi)-(ix).

In general, CBPs inspected by Pollution Control lacked paved areas which resulted in high off-site particulate emissions and off-site tracking of particulate matter onto the highway. Concrete batch plants often fail to clean up spilled materials, such as aggregate and finished concrete, which further contributes to off-site tracking and increased particulate emissions. Operators sometimes note they fail to promptly clean up spills because doing so would require a pause in operations, meaning they are resistant to anything that would delay or slow business operations even at the expense of compliance. Pollution Control frequently observes suction shrouds that surround the truck loading contact points to be damaged or missing, resulting in additional particulate emissions. Facilities fail to maintain buffer distances for stockpiles or fail to contain stockpiles at least three feet less than the top of a three-walled bunker, which means a high likelihood of off-site impacts. Facilities fail to perform sweeping and collection, whether that is because they do not have a dedicated sweeper for the facility and have contracted for sweeper services or they have a sweeper that does not vacuum and results in dirt being stirred up as opposed to being collected.

To better understand PM emissions at CBPs and to investigate community concerns regarding off-site impacts, Pollution Control has utilized Flir (infrared) cameras to observe emissions at CBPs. Using the Flir cameras, Pollution Control investigators have documented emissions from the CBPs dissipating, and while longer visible to the naked eye they are nonetheless moving past the property line. Thus, PM emissions are leaving CBP facilities and accumulating on neighboring properties, a common community complaint. However, these emissions are not a violation of the CBP Standard

Permit because it only prohibits visible fugitive emissions from leaving the property. *See* 2021 CBP Standard Permit, ¶(5)(H). Harris County requests that TCEQ expand the language prohibiting visible emissions from leaving the CBP property in the Proposed CBP Standard Permit ¶ (5)(H) by prohibiting **any** emissions from leaving the property, including those observed with specialized equipment such as Flir cameras.

Harris County appreciates TCEQ's amendments to the CBP Standard Permit, but based on the above-referenced observations, Harris County recommends the following additional changes to the CBP Standard Permit when assessing the best available control technology (BACT), as required by Tex. Health & Safety Code § 382.05195(a)(1)-(3):

1) Prior to operation, require a facility to submit an As-Built Certification, signed and sealed by an engineer, to the TCEQ and the local pollution control authority;
2) Addition of language similar to that contained in TCEQ Permit TXR050000 at Part III, Section E(2)(1): "Need to Halt or Reduce not a Defense. It is not a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the general terms of the permit;"
3) Prohibit co-location and set a minimum distance from another concrete batch plant, or aggregate-producing, handling, or processing facility;
4) Further expand buffer zones for a concrete batch plant authorized by the CBP Standard Permit facility;
5) Establish emission limits or place other operational restrictions on plant emission sources for those that are not limited by throughput restrictions (i.e. the baghouse), such as the conveyors and stockpiles;
6) Increase the frequency operators are required to conduct visible emissions observations under Method 22 from quarterly to daily and require the observations to occur during peak operations;
7) Require annual training for both managers and employees regarding permit compliance requirements, specifically including housekeeping requirements and procedures;
8) Require the annual training to be conducted in an alternative language if employees are Limited English Proficient;
9) Require the Permittee to maintain records of all manager and employee training;
10) Require a designated point of contact with an available name and phone number to the surrounding community by a sign at the facility gate;
11) Require the Permittee to post and enforce a speed limit of 5 mph (8 km/h) on facility grounds;
12) Require CBPs to use two or more best management practice methods to prevent tracking of sediment onto adjacent roadways and reduce the generation of dust listed in the Proposed CBP Standard Permit ¶ (8)(G);
13) Require all trucks entering and exiting the facility carrying loose material to be covered;
14) Require Permittees to designate a paved area of the facility for parking and equipment maintenance to help isolate spills and leaks;
15) Expand setback requirements for mixing equipment and silos from the property lines;

16) Require the Permittee to minimize drop heights of materials to reduce dust;
17) Require all material stockpiles:
    a. to be covered when not in use;
    b. to be a set distance from the property boundary;
    c. to be enclosed in bins; and
    d. limit the height of the enclosed stockpiles to 2 feet below the top of the bins;
18) Install a dust-suppressing barrier as a border around roads, traffic areas, and work areas along any portions of the facility that share a property line with a residential property, neighborhood, school, or medical facility;
19) Require a fixed schedule of water sprays for roads and stockpiles to control dust;
20) Require the use of a vacuum sweeper to sweep paved areas and for sweeping to occur on a fixed schedule at all facilities;
21) Require additional dust suppression activities during dry or windy periods;
22) List circumstances that would trigger a dust control water spray and require facilities to continuously monitor for conditions during operational hours; and
23) Consider whether proximity to a church, school, medical facility, residence, or other sensitive populations should result in an increased buffer distance.

Lastly, Pollution Control has noted that various facilities use a wide variety of means to document their hourly production rates. Given the importance of documenting production rates and to maintain consistency among operations, Harris County requests TCEQ develop a standard form for hourly production recordation and incorporate it by reference in the CBP Standard Permit.

CBP Standard Permit Protectiveness Review Limits

In support of the Proposed CBP Standard Permit, the TCEQ performed the 2023 Protectiveness Review. As further explained below, Harris County has reviewed the 2023 Protectiveness Review and has concerns that various emissions are unexplained, underestimated, or made using unsupported assumptions.

Emission Reductions for Control Measures were not Validated

The 2023 Protectiveness Review includes control efficiencies for washed material (95% control)[11] in the material handling emission calculations, material stockpile emissions (98.5% control)[12], and for the partial enclosure around the truck loading area - 3 sides from the bottom of silos to the ground (85%). Each of these control efficiencies are critical to the modeled projections of potential

[11] See TCEQ CBP Amendment Website file entitled "Confidential –Work ProductDraft Deliberative STD Permit Calc - with multiple prod rates-BM.xlsx." Cells G14:G21 and cell D25 of the "300 cu_yaCalculations_99%" tab in the referenced file.

[12] TCEQ CBP Amendment Website file entitled "Confidential –Work ProductDraft Deliberative STD Permit Calc - with multiple p.rod rates-BM.xlsx." Cell F88 and notes on rows 90:92 of the "300 cu_yd Calculations_99%" tab in the referenced file.

health effects from CBPs. TCEQ provided no justification or validation for each of these control measure emission reductions. Harris County requests that TCEQ provide a technical basis validating the significant reduction in modeled emissions for these control measures.

Cumulative Impacts were only considered for commonly owned CBPs

TCEQ is required to protect the public from cumulative risk in areas of concentrated operations. Tex. Water Code § 5.130. The proposed CBP Standard Permit provides additional limitations and setback distance constraints for multiple CBPs at the same site. Proposed CBP Standard Permit, (8)(A)(iii), referencing Table 3. These restrictions are limited to those that are part of the same site, which is defined as all stationary sources located on one or more contiguous or adjacent properties, which are under the common control of the same person (or persons under common control). *Id.* at (2)(I). However, the same cumulative impacts that trigger additional constraints would exist regardless of the ownership status of multiple adjacent plants. The requirements presented in Proposed CBP Standard Permit, (8)(A)(iii), referencing Table 3 should have a similar requirement for any CBP proposed to be located adjacent to or near an existing CBP regardless of whether there is common ownership or control. To protect from cumulative risk from nearby CBPs, the CBP Standard Permit should require a set buffer distance between CBPs as determined by modeling from a protectiveness review that is fully protective of human health.

Given the aggregation of industry in Harris County, it is unclear how the TCEQ Protectiveness Review assessed cumulative impacts from multiple PM sources in these areas of concentrated operations. A recent application to amend a CBP by Yellow Jacket Ready Mix, LLC, a facility in the East Aldine Community of Harris County, illustrates the concern.[13] There are a total of seven concrete batch plants and two concrete crushing facilities within a 3-mile radius of the Yellow Jacket facility, none of which are co-owned. *See* Figure 4. How did the TCEQ assess cumulative impacts to ensure a facility authorized under the CBP Standard Permit is protective of human health and the environment?

[13] Application to Amend CBP Standard Permit, TCEQ Permit No. 78606.

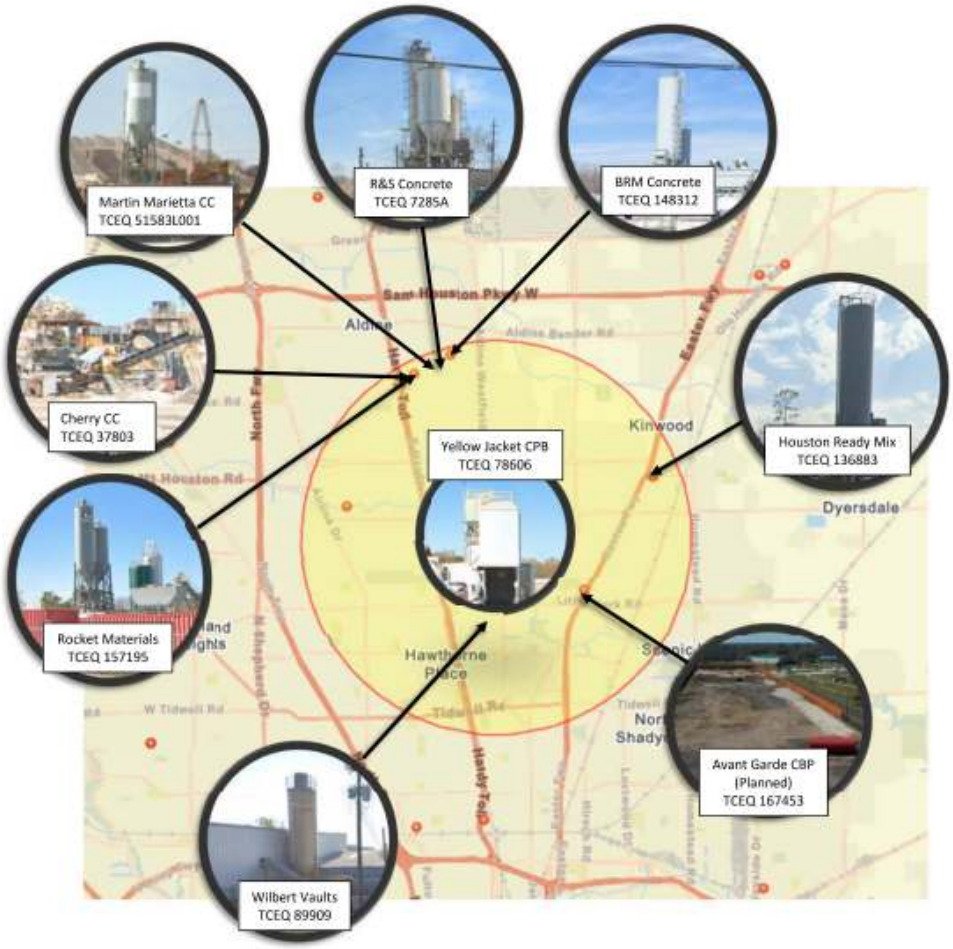

Figure 4: Map showing the proximity of 7 CBPs and 2 concrete crushing facilities within a 3-mile radius in the East Aldine Community of Harris County.

Increased Total Site Production Rate for Multiple Plants

Due to the 2023 Protectiveness Review, the Proposed CBP Standard Permit caps the hourly production rate for a single CBP operating in Harris County at 200 yards/hour. Proposed CBP Standard Permit ¶ (8)(A)(i) and (ii). In contrast, the same Proposed CBP Standard Permit allows multiple plants operating at the same site to increase the total site production rate to 300 yards per hour. Proposed CBP Standard Permit, (8)(A)(iii), referencing Table 3. If a single batch plant results in emissions that require production limits to be set at 200 yards/hour, it is unclear how multiple plants at a site would require less restrictive production limits and remain protective of human health and the environment. Harris County requests that the total site production rate for multiple plants at a site be the same as a single plant – 200 yards per hour.

Emissions from truck loading were underestimated

The 2023 Protectiveness Review short-term emission rates from truck loading operations consider emissions collected and routed to the baghouse stack (EPN 5) and uncollected emissions that escape as fugitives (EPA 4). Modeling data files provided on the TCEQ CBP Permit Amendment Website include an Excel file named "Confidential –Work ProductDraft Deliberative STD Permit Calc - with multiple prod rates-BM.xlsx." This data specified truck loading emissions at a loading rate of 84.6 tons per hour (tph). However, this only considers the loading of cement and supplement into the trucks. This is concerning because all dry ingredients, including aggregate and sand, are loaded into the trucks and can contribute to the emission of PM_{10} and $PM_{2.5}$. These emission rates should be based on the loading of all concrete ingredients which according to TCEQ's modeling files is 578.6 tph. Therefore, emissions were underestimated by a factor of 578.6/84.6 or a factor of 6.84. Emissions should have been considered as follows:

EPN	Name	TCEQ Considered		Corrected Calculations	
		PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)	PM_{10} (lb/hr)	$PM_{2.5}$ (lb/hr)
5	Baghouse Stack	0.130	0.022	0.888	0.152
4	Fugitives (from loading)	0.262	0.045	1.794	0.307

Silica Emissions were not Justified or Explained

TCEQ modeled emissions of silica from the silos are based on a presumed content of silica in cement and in flyash. TCEQ notes that this was "*based on a respirable silica content in the cement of 1% and a respirable silica content in flyash of 7% for an overall percentage of 1.66% using a cement to flyash ratio of 89 parts of cement to 11 parts of flyash in concrete. The source of the silica content percentages is from a review of various Safety Data Sheets (SDS) for cement and flyash.*[14]" There are several issues with this approach:

a. It is unclear whether the silica content selected by TCEQ from the "various Safety Data Sheets" (SDS) reflect the maximum potential silica content of cement and flyash. The maximum potential silica content should be used to ensure the protectiveness of the operations regardless of the silica content; and
b. TCEQ's modeling of airborne PM emissions is linked to the composition of the dry material, with no consideration to the other characteristics such as density/weight/size that would impact the airborne concentrations. Note that percentages on SDSs reflect the composition of the bulk material, not the airborne dust generated from the handling of

[14] TCEQ Technical Background Summary for the Proposed CBP Standard Permit, Page 6 of 11, located at https://www.tceq.texas.gov/downloads/permitting/air/nsr/nsr-stakeholders/22033-oth-nr-cbpsp23-3-techbckgrnd.pdf.

that bulk material. For example, a mixture that includes 60 lb. of golf balls and 40 lb. of baby powder may be 40% baby powder by mass, but it would be incorrect to assume that the dust emissions generated by transferring that mixture would only be 40% baby powder and would be 60% golf ball dust. All of the dust emissions would be baby powder and none would be golf balls.

Silica Emissions were Underestimated

TCEQ determined fugitive emissions of silica by taking the PM emission rate associated with truck loading of cement and flyash and then applying the 1.66% factor discussed above. As Harris County pointed out, the PM emission rate from truck loading is understated by nearly a factor of 7 because it fails to consider all of the dry materials loaded into the trucks. This underestimation also manifests itself in the calculated silica emissions. In addition, no silica emissions are considered from any of the sand handling operations, from stockpiles through multiple subsequent transfers. Unlike cement and flyash, which are only partially made up of crystalline silica, sand is more, if not 100% crystalline silica. No silica emissions were calculated from sand stockpiles, which clearly have PM emissions but TCEQ failed to model any silica emissions deriving from them. No silica emissions were calculated from the sand transfer operations. Fugitive emissions of silica should have been considered as follows:

Item	**Value**	**Calculation**	**Emission Rate**
Silica Emission Rate in TCEQ Model			**0.0157 lb/hr**
Adjustment Factor to account for all dry material loaded into trucks	6.84	0.0157 X 6.84	0.107 lb/hr
PM_{10} Emissions from Sand Handling (EPNs 6, 7, 8, and 9)	0.042 lb/hr	0.107 + 0.042	0.149 lb/hr
% of Stockpile Area for Sand (based on 1,428 lb sand:1,865 lb aggregate/yd^3 concrete)	43.4%		
PM_{10} Emissions from Stockpiles (EPN 10)	0.006 lb/hr	0.149 + 0.006	**0.155 lb/hr**

Thus, fugitive silica emissions were underestimated by a factor of 10.

Stockpile Emissions were Underestimated

TCEQ calculated stockpile emissions by determining annual emissions, and then calculating an hourly emission rate for use in the short-term modeling for the health effects analysis by averaging the annual emission rate across the whole year. More simply, TCEQ divided the annual emission rate by 8,760 hr/yr (representing 24 hr/day X 365 days/yr). This is concerning because the maximum hourly emissions from stockpiles will occur when the wind gusts are highest, considering the fastest mile observation and certainly not simply an average rate (which by definition would have some hours with lower emission rates and some hours with higher emission rates). A true protectiveness review would need to assess the impacts from emissions during the highest emitting conditions – in this case, when maximum (not average) winds are observed. The effects screening level or ESL for silica may be exceeded during times of higher wind gusts.

Emissions from Tier 4 Emissions were Assumed

PM_{10} and $PM_{2.5}$ emissions from the engines were calculated by TCEQ in 3 categories: Tier 1 emission standards for Model Year 2000, Tier 4 emission standards for engines manufactured in 2014 and earlier, and Tier 4 emission standards for engines manufactured after 2014. Emissions for the oldest engines were the highest, while emissions decreased for later models as engines got newer. Though the TCEQ calculated emissions for all 3 categories, only the emissions from the middle category – Tier 4 Model Year 2014 and earlier – were considered in the protectiveness review. This may be appropriate and even conservative for a proposed site installing brand new engines, but for a site that has been in operation for many years that seeks to renew their Standard Permit authorization, they may not have such a new engine and would this have higher emissions. Emissions were calculated as follows:

Pollutant	Tier 1 (Model Year 2000)	Tier 4 (2014 and Earlier)	Tier 4 (After 2014)
PM_{10}	0.888	0.164	0.049
$PM_{2.5}$	0.888	0.164	0.049

CBP Standard Permit Amendments are Unenforceable

TCEQ is authorized to issue a standard permit for similar facilities only if the standard permit is enforceable and includes adequate compliance and monitoring. Tex. Health & Safety Code § 382.05195. The Proposed CBP Standard Permit lacks compliance requirements and is unenforceable in several key areas.

Emission Reductions for Control Measures Lack of Enforcement Provisions

The 2023 Protectiveness Review includes emission reduction assumptions for washed material, stockpiles, and engine ratings. These reductions were critical to minimizing offsite impacts and in the protectiveness review determinations, as they are perceived to be very high control efficiencies. However, the Proposed CBP Standard Permit doesn't include any corresponding record-keeping or technical requirement to ensure compliance with the controls that drive the assumptions. Harris County requests permit language be added to address the following:

a. **Washed Material:** The Proposed CBP Standard Permit requires "all sand and aggregate shall be washed prior to delivery to the facility." Proposed CBP Standard Permit (5)(L). However, there is not an associated recordkeeping requirement listed in (3)(J) of the Proposed CBP Standard Permit. Without such a provision, there is no requirement that a facility demonstrate that all sand and aggregate is washed prior to delivery, which is concerning given the 95% control assumed from the washing of the material. This critical component to TCEQ's emission calculation and associated protectiveness review must be enforceable to ensure the health of Harris County residents (and all residents near CBPs) is protected.

b. **Stockpile Area:** Stockpile emissions used in the modeling are based on an area of 1.5 acres, but there is no limitation in the Proposed CBP Standard Permit on the stockpile footprint. Harris County requests language in the amended CBP Standard Permit limiting stockpiles to 1.5 acres.

c. **Engine Rating:** Engine emissions in the Protectiveness Review are based on Tier 4-rated engines. As stated above, there can be variability in emissions depending on the age of the engine. Therefore, engine certification should be explicitly stated in order to ensure that the projected emissions fall within what was considered in the protectiveness review.

Nuisance Conditions

As mentioned above, Harris County receives many complaints about batch plant operations – many of which are about off-site nuisance impacts which are prohibited by Tex. Health & Safety Code § 385.085 and 30 Tex. Admin. Code § 101.4. It is unclear what, if any, nuisance analysis TCEQ conducted, including any assessment of the impacts and projected emission reductions provided by the operational requirements imposed in the Proposed CBP Standard Permit (8)(G).

Best Management Practices are not required

The Proposed CBP Standard Permit allows an operator to control off-site tracking of sediment onto adjacent roadways and reduce the generation of dust with a list of best management practices including the use of a tire-wash system. Proposed CBP Standard Permit (8)(G)(iv). In pertinent part, the provision requires "the use of a tire-wash system. . . to remove sediment from the wheels and undercarriage of trucks. . .It *should* be (1) located in front of some type of traffic restriction such as a scale, plant gate, or a stop sign to encourage its proper use, and (2) *should* be set back at least 50 feet from the public road" (emphasis added). However, this provision lacks enforceable language by the inclusion of the term "should." Harris County requires that this term be changed from should to shall.

Setback Distances

As a result of the Protectiveness Review, the Proposed CBP Standard Permit increases setback distances for stationary equipment, stockpiles, and roads. Within the same permit, these setback distances requirements are exempted if the owner or operator constructs a dust suppressing fence or other barriers as a border around roads, other traffic areas, and work areas, construct these borders to a height of at least 12 feet; and contains stockpiles within a three-walled bunker that extends at least two feet above the stockpile. Proposed CBP Standard Permit (8)(I). However, as noted above, failure to adhere to the maintenance of stockpile height limits within the three-walled bunker is a commonly observed violation of Pollution Control and facilities generally have no urgency to abate the violation when it is noted by an investigator. In theory, this is a helpful best management practice. Unfortunately, it is not observed in practice and should not be allowed as an exemption in an enforceable standard permit when the distance requirements are more enforceable and are more likely to be complied with by an owner or operator.

Table Titles

To provide additional clarity in the CBP Standard Permit, Harris County requests TCEQ provides titles for Tables 1, 2, and 3 as follows:

- Table 1: Production Rates & Setback Distances, single site with shrouded mixer truck-receiving funnel
- Table 2: Production Rates & Setback Distances, single site with mixer truck loading enclosed within walls
- Table 3: Production Rates & Setback Distances, multiple plants at a single site, mixer truck loading enclosed within walls

Anticipated Lowering of the $PM_{2.5}$ National Ambient Air Quality Standard (NAAQS)

On January 6, 2023, the EPA proposed to revise the primary annual $PM_{2.5}$ standard from its current level of 12.0 $\mu g/m^3$ to within the range of 9.0 to 10.0 $\mu g/m^3$, and accepted comments on further lowering the standard to 8 $\mu g/m^3$. Harris County submitted a comment on the proposal in support of the EPA's reconsideration to lower the standard to a range of 9.0 to 10.0 $\mu g/m^3$. As noted above, the

County is currently designated as "unclassifiable/attainment" for $PM_{2.5}$, is "at-risk" for $PM_{2.5}$ nonattainment, and will likely be classified as nonattainment should EPA adopt the newly proposed $PM_{2.5}$ NAAQS.

The Protectiveness Review would be materially impacted by a more protective NAAQS, likely resulting in increased buffer distances, lower production rates, and more stringent controls. The Proposed CBP Standard Permit should anticipate that likely scenario by either (1) triggering a reopening of the CBP Standard Permit should the $PM_{2.5}$ NAAQS be changed or (2) provide increased setback distances and throughput reductions that would be triggered upon EPA's adoption of a more stringent $PM_{2.5}$ NAAQS. This would ensure that the public is kept safe, especially when science dictates that a health standard should be more stringent.

Shortening of Permit Term

TCEQ rules allow an owner or operator to register under a standard permit – such as the CBP Standard Permit – for a term not to exceed ten years. 30 Tex. Admin. Code § 116.604. Currently, TCEQ authorizes operations for registrants under the CBP Standard Permit for a period of ten years – the full length of time authorized by rule. Operators are then required to submit a renewal application. If the TCEQ has issued an updated CBP Standard Permit since the initial authorization, operators are required to comply with the updated permit on the later of the date the registration is renewed or two years from the effective date of the updated permit, whichever is later. CBP Standard Permit ¶ (3)(F).

Ten-year permit authorization is too extended for operations that have frequently observed violations, off-site impacts and are authorized by a protectiveness review that would be impacted by updated NAAQS or changing background concentrations. Additionally, renewals at ten years fail to account for the entire enforcement history at a Facility because TCEQ compliance history scores only consider the proceeding five-year compliance period. 30 Tex. Admin. Code § 60.1(b). Should the EPA lower PM2.5 NAAQS, the current ten-year registration period could potentially allow unabated emissions above standards determined to be protective of human health. Even the Texas Legislature has recognized the importance of shorter permit terms and regularly updated protectiveness reviews. In this legislative session, the Texas Legislature passed S.B. 1399[15], which would require the TCEQ to conduct a protectiveness review at least once every six years and require each authorization to use the permit be reviewed at least once every six years. Harris County requests that TCEQ shorten the time a registration is valid under the CBP Standard Permit to a term not to exceed five years to conform to S.B. 1399 and run parallel with TCEQ compliance history scores.

Plants Operating under the prior CBP Standard Permit must comply with the Amended CBP Standard Permit

30 Tex. Admin. Code § 116.605(d)(1) provides TCEQ authority to require all operators to comply with the CBP Standard Permit amendment as soon as possible when it is "necessary to protect

[15] https://capitol.texas.gov/tlodocs/88R/billtext/html/SB01399F.htm

public health." The 2023 Protectiveness Review and the increased restrictions on batch plant operations in the Proposed CBP Standard Permit demonstrate that the 2012 protectiveness review and the 2021 CBP Standard Permit is not protective of human health. Many CBPs are currently operating under the 2012 and the 2021 CBP Standard Permit and may be emitting particulate matter and/or crystalline silica at dangerous concentrations, impacting nearby residents. Under 30 Tex. Admin. Code §116.605(e), the TCEQ should require all plants to register under the amended CBP Standard Permit within 3 months from the adoption of the amended CBP Standard Permit.

To protect public health, the TCEQ must update or revoke the Standard Permit for Concrete Batch Plants with Enhanced Controls

In 2004, the TCEQ issued the Air Quality Standard Permit for Concrete Batch Pants with Enhanced Controls (Enhanced Controls CBP Standard Permit). TCEQ had previously issued the CBP Standard Permit in 2000 and relied on a protectiveness review that determined it was protective of human health. The TCEQ assumed the Enhanced Controls CBP Standard Permit was protective because it was considered to have lower impacts than the 2000 CBP Standard Permit. However, prior protectiveness reviews failed to account for crystalline silica emissions, background concentrations, cumulative impacts and didn't account for the later updated $PM_{2.5}$ NAAQS. While Harris County continues to have concerns with some of the assumptions and inputs in the 2023 Protectiveness Review, its modeling results did account for the updated $PM_{2.5}$ NAAQS and background concentrations, which drive significant changes in the Proposed CBP Standard Permit. For example, the 2023 Protectiveness Review triggered throughput reductions and increased setback distances in the Proposed CBP Standard Permit. In other words, the prior historical protectiveness reviews are not protective of human health and cannot be relied upon as the basis for TCEQ to continue to allow plants to operate under the CBP Standard Permit with Enhanced Controls. Harris County requests that TCEQ revoke the Enhanced Controls CBP Standard Permit under 30 Tex. Admin. Code § 116.605 or issue a moratorium on new registrations under the Enhanced Controls CBP Standard Permit until such time as the TCEQ can update the permit in a manner that protects human health.

***

Thank you for the opportunity to comment on the Proposed CBP Standard Permit and 2023 Protectiveness Review. If you have any questions, please feel free to contact Sarah Utley at sarah.utley@harriscountytx.gov.

Sincerely,

CHRISTIAN D. MENEFEE
Harris County Attorney

JONATHAN G. C. FOMBONNE
First Assistant County Attorney

TIFFANY S. BINGHAM
Managing Counsel, Environmental

By: /s/ Sarah Jane Utley
SARAH JANE UTLEY
Environmental Division Director
Sarah.utley@harriscountytx.gov
BETHANY DWYER
Assistant County Attorney
Environmental Division
Bethany.dwyer@harrsicountytx.gov
Harris County Attorney's Office
1019 Congress Avenue, 15th Floor
Houston, Texas 77002
Telephone: (713) 274-5124
Facsimile: (713) 437-4211

MCELROY, SULLIVAN, MILLER & WEBER, L.L.P.

By:*/s/ Adam M. Friedman*
Adam M. Friedman
afriedman@msmtx.com
Hailey Culhane
hculhane@msmtx.com
P.O. Box 12127
Austin, Texas 78711
Tel: (512) 327-8111
Fax: (512) 350-2681

cc: *Via Email*
Dr. Latrice Babin, Director, Harris County Pollution Control Services Department