Comments of American Fuel & Petrochemical Manufacturers, American Petroleum Institute, Portland Cement Association, American Chemistry Council, and U.S. Chamber of Commerce on EPA's Proposed Revised Cross-State Air Pollution Rule Update for the 2008 Ozone NAAQS 85 Fed. Reg. 68,964 (Oct. 30, 2020)

The American Fuel & Petrochemical Manufacturers, American Petroleum Institute, Portland Cement Association, American Chemistry Council, and United States Chamber of Commerce (the "Associations") respectfully submit these comments on EPA's proposed Revised Cross-State Air Pollution Rule Update for the 2008 Ozone National Ambient Air Quality Standard ("NAAQS") established under the federal Clean Air Act ("CAA" or "Act"). 85 Fed. Reg. 68,964 (Oct. 30, 2020) ("Proposed Rule").

The Associations' members include owners and operators of refining, chemical manufacturing, cement manufacturing and other industrial facilities that have sources that are considered for regulation in the Proposed Rule. These facilities already control emissions as required by existing federal and state law, and thus have already made substantial emissions reductions under CAA regulations and associated state implementation plans ("SIPs") issued under the Act, as well as through other mechanisms. The Associations' members would incur significant additional costs were EPA to require additional emissions controls under the Proposed Rule.

The Associations support EPA's proposal not to require non-electric generating units ("non-EGUs") to install additional controls across 22 upwind states under Section 110 of the CAA to address nonattainment with the 2008 ozone NAAQS at three downwind receptors in Connecticut. We urge EPA to finalize that aspect of its proposal, because it fairly and properly implements the Agency's responsibilities under the Act. We also urge EPA to revisit the 1% metric it uses to assess whether downwind states are "linked" to upwind states when EPA evaluates interstate emissions transport obligations under the Act. EPA should instead use a statistically significant threshold of not less than 1 ppb for ozone – and consider the actual contribution of domestic sources when evaluating whether the contribution is significant. Finally, we appreciate EPA's acknowledgement of data gaps that misrepresent and overstate emissions reduction opportunities, in particular for non-EGUs, based on design, technical, and cost constraints not reflected in current data.

In the Proposed Rule, EPA applies its longstanding 4-step framework for identifying and addressing interstate transport issues under CAA section 110. That provision requires states to restrict emissions that will "contribute significantly" to nonattainment or interfere with maintenance in any other state with respect to any primary or secondary NAAQS. 42 U.S.C. § 7410(a)(2)(D)(i). Under the 4-step framework, (1) EPA evaluates whether a downwind receptor is expected to have a non-attainment or maintenance issue in the relevant future year (Step 1), (2) if so, EPA determines if the upwind state(s) is "linked" to the downwind receptor(s) by contributing above a threshold amount to the downwind attainment issue (Step 2), and (3) for states linked to the downwind air quality issue, EPA identifies upwind emissions that contribute significantly to downwind nonattainment or interfere with downwind maintenance of the NAAQS, including by evaluating whether highly cost-effective control measures are available to address air quality at the downwind receptor (Step 3). If these are established, EPA may fashion a rule directing states to adopt plans to adopt the necessary measures (Step 4).

EPA has found (at Step 1) that three receptors will face non-attainment or maintenance issues with the 2008 ozone NAAQS in 2021. The Associations raise the following comments regarding EPA's analysis of Steps 2 and 3:

I. At Step 2 of its analysis, EPA should reconsider its finding that there is a significant contribution from upwind sources to the modeled non-attainment

EPA uses a contribution threshold to determine that certain states have no remaining interstate transport obligations with respect to the 2008 NAAQS at downwind receptors. *See EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489, 521–22 (2014). Using this 1 percent threshold, EPA correctly excluded ten states from further coverage by the Proposed Rule because the states contributed less than 1% of the NAAQS to the downwind receptors. However, EPA is not bound to use a 1 percent screening threshold, as EPA has flexibility to determine an appropriate Step Two screening threshold on a case-by-case basis.[1] Yet, if EPA were to permanently apply a 1 percent threshold as part of a Step Two evaluation, that would mean that, as EPA adopts increasingly more stringent NAAQS levels, ever-smaller contributions from upwind states could subject sources to increasingly costly additional regulation.

EPA has chosen not to revisit this percentage here, but we urge EPA to do so, as sound policy and practicality support setting the contribution threshold at a higher level. For one, applying a significant contribution threshold above 1 percent would be consistent with long-standing federal policy of seeking to reduce regulatory burdens that do not provide material additional benefits.[2] As the U.S. Supreme Court has made clear, EPA is also legally prohibited from controlling emissions in excess of the amounts constituting significant contribution. *EME Homer City*, 572 U.S. at 521-22 ("over-control" is prohibited, and requiring upwind emission "reductions unnecessary to downwind attainment" constitutes proscribed "over-control"). Thus, EPA must avoid a threshold set so low that sources could be subject to requirements to shut down or install expensive control technologies without a meaningful benefit to air quality. EPA should exercise its discretion to use a metric that is above 1 percent. The Associations suggest

[1] *See* P. Tsirigotis Memo, Analysis of Contribution Thresholds for Use in Clean Air Act Section 110(a)(2)(D)(i)(I) Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards at 2 (Aug. 31, 2018), https://www.epa.gov/sites/production/files/2018-09/documents/contrib_thresholds_transport_sip_subm_2015_ozone_memo_08_31_18.pdf ("August 2018 Tsirigotis Memo") (explaining that EPA can identify on a case-by-case basis an appropriate significance threshold specifically applicable to the NAAQS being considered).

[2] This reflects a reasonable approach going forward as the nation faces the economic challenges imposed by the COVID-19 pandemic and is consistent with a long standing approach by successive administrations, including Executive Orders issued by President Obama and President Clinton that remain in effect today. Executive Order 12866, "Regulatory Planning and Review," (Sept. 30, 1993) ("When an agency determines that a regulation is the best available method of achieving the regulatory objective, it shall design its regulations in the most cost-effective manner to achieve the regulatory objective." Executive Order 13563, "Improving Regulation and Regulatory Review," (Jan. 18, 2011) (directing each agency to "tailor its regulations to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations…"). That has also been the policy of the current administration - Executive Order 13771, "Reducing Regulation and Controlling Regulatory Costs" (Jan. 30, 2017); Executive Order 13777, "Enforcing the Regulatory Reform Agenda" (Feb. 24, 2017); Executive Order 13783, "Promoting Energy Independence and Economic Growth" (Mar. 28, 2017).

the following two options for EPA to use in identifying the appropriate threshold that will trigger further analysis of whether significant contributions exist:

1. **Threshold floor at or above statistical significance**. EPA should consider setting a significance threshold floor consistent with its recent, related guidance.[3] In 2018 guidance, EPA set an ozone significant impact level (SIL) of 1 ppb to determine when a source has an insignificant (*de minimis*) contribution to the ozone NAAQS. EPA's assessment revealed that values below 1 ppb are not statistically significant.[4] Thus, at a minimum, EPA should not determine there is a link at Step Two unless EPA finds that there is a statistically significant contribution—which EPA's SIL analysis has found must be at least 1 ppb.[5] Recognizing the statistically insignificant contribution being made at 1 ppb avoids including sources with no practical impacts. Applying this threshold here demonstrates at least one of the states (Illinois) that EPA has identified as linked to receptor sites in Connecticut is statistically insignificant – and thus should not be included as it will not create a statistically important improvement from imposing controls.

2. **Threshold for addressing controllable emissions**. EPA should also consider basing its Step 2 threshold in a way that recognizes the actual share of emissions from controllable domestic sources to determine whether the contribution is in fact significant. The reason is straightforward. In recent years, EPA has increased the stringency of the ozone NAAQS standards, with the most recent standards being set in 2015 at 70 ppb for both the primary and secondary standards,[6] resulting in increased control of domestic sources of ozone-forming pollutants, such as NOx. At the same time, natural background ozone, ozone due to emissions from exceptional events, and ozone from international sources reflect an ever-increasing share of domestic ozone levels that EPA has acknowledged "can substantially influence" monitored ozone concentrations.[7] The role of these natural and international anthropogenic background ozone emissions is of growing importance with summer season average U.S. background concentrations along the West and East coasts estimated to be has high as 20-40 ppb.[8] There are certain places, such as near the border or high elevation areas, or episodically where the ozone background levels exceed 60 ppb.[9] These are orders of magnitude higher than the small contributions covered by EPA's approach. The result is that the actual amount of controllable

[3] P. Tsirigotis Memo, Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program at 15-16 (Apr. 17, 2018), https://www.epa.gov/sites/production/files/2018-04/documents/sils_policy_guidance_document_final_signed_4-17-18.pdf ("SIL Guidance"); *see also* Ramboll Technical Report at 55.

[4] SIL Guidance at 12-13.

[5] August 2018 Tsirigotis Memo at 2 (guidance indicates that 1 ppb is an appropriate significance threshold for states to evaluate contributions when preparing SIP submissions to address the 2015 ozone NAAQS.)

[6] 80 Fed. Reg. 65,291 (Oct. 26, 2015)

[7] National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. 65,292, 65,300 (Oct. 25, 2015) ("[O]bservational and modeling analyses have concluded that O_3 concentrations in some locations in the U.S. on some days can be substantially influenced by sources that cannot be addressed by domestic control measures.").

[8] Jaffe, DA, Cooper, OR, Fiore, AM, Henderson, BH, Tonneson, GS, Russell, AG, Henze, DK, Langford, AO, Lin, M and Moore, T (2018). Scientific assessment of background ozone over the U.S.: Implications for air quality management. Elem Sci Anth 6(1): 56.

[9] *Ibid.*

emissions— *i.e.*, emissions that are not due to background, exceptional events, or international sources—has decreased – but those controllable sources remain subject to the same, stringent "linkage" requirement that ignores background. Accounting for the contribution from background sources and conditions will help EPA evaluate the significance of an upwind state's contribution and whether that contribution merits additional analysis under Step 3.

II. At Step 3, EPA has correctly proposed to find non-EGU emission reductions do not contribute significantly to and are not required to address downwind non-attainment with the 2008 ozone standards

For non-EGUs, EPA evaluated the information it had from the CSAPR Update,[10] available industry literature, and consent decrees to determine that it should not impose additional controls on non-EGUs. EPA should retain this approach in the final rule for this rulemaking.

In the Proposed Rule, EPA reasons that (1) it should focus on sources that emit at least 150 tons/year of NOx, (2) NOx controls on non-EGUs are cost-effective if in the range of $1600-$2000/ton, but (3) those types of cost-effective controls cannot be installed, in part, due to the time needed to complete any engineering, design, permitting, and construction at applicable non-EGU sources across a dozen states until 2023 or 2024, and (4) as the NOx restrictions imposed on EGUs will ensure there will be no downwind issues in 2025, any potentially cost-effective controls on non-EGUs that could be installed by 2023 or 2024 would not reduce downwind ozone concentrations sufficiently to warrant additional control during those interim years.

Each step in EPA's analysis is sound and provides ample support to find that non-EGU sources do not merit additional controls under this regulation. Moreover, EPA reasonably relied on available information, putting the burden on stakeholders seeking more stringent upwind controls to bring forth additional information to establish that non-EGU controls can be more timely installed on a highly cost-effective basis.

First, for non-EGU stationary sources, EPA focused on NOx emissions, reasoning that was the most effective precursor from stationary sources to address interstate ozone transport at a regional scale. To identify potential levels of control, EPA reasonably assessed potential emissions reductions associated with 150 tons (or more) per year of NOx, as it was a comparable level to 25 MW for EGUs that EPA had used in previous rulemakings. It then identified controls for certain non-EGU sources in states for which it believed it had sufficient information, and determined a weighted average cost/ton to remove NOx.

This approach is sensible here and EPA should retain it for purposes of this rule, as attempting to address the contributions of even smaller sources of NOx or myriad VOC sources would add unnecessary complexity and burden to this regulatory framework. A different approach may be appropriate under a tighter ozone standard. Regardless, the burden should be placed on downwind states to demonstrate that an in-depth review of smaller sources in this proposal can result in highly cost-effective measures to address upwind state contributions.

[10] 81 Fed. Reg. 74,504 (Oct. 26, 2016).

Second, EPA concluded that cost-effective NOx controls on non-EGUs are in the range of $1,600-$2,000/ton of NOx removed, specifically as to EPA's Tranche One (glass manufacturing and cement kilns). The available data show "a clear breakpoint" at approximately $1,900/ton, providing ample support for EPA to exclude controls that are more costly, such as controls in EPA's Tranche Two (internal combustion engines and industrial / commercial boilers in the oil and gas industry and manufacturing).[11] In fact, even sources within Tranche One may fall outside EPA's cost-effectiveness range, as EPA included in its calculations emissions reductions from certain cement kilns that are already controlled.[12]

Moreover, these are retrofits, and thus in some cases, plant configurations can mean that controls are not technically feasible to install or such controls can only be installed at significant additional capital expense above the average cost EPA calculates. For instance, EPA identified kiln 2 at the Lehigh Cement Company facility in Cass County for possible emissions reductions.[13] However, on July 19, 2017, Essroc Cement Corp. (Essroc), (who was acquired by Lehigh Cement Company a short time earlier but still operated the facility at the time) , entered into a consent decree with EPA and the Department of Justice acknowledging and stating that it is not feasible to install SNCR on kiln 2, due to the "current configuration of the equipment.[14] In a letter to EPA and the Department of Justice (DOJ), Essroc outlined the technical reasons why it was not feasible to install SNCR at kiln 2 and water injection was identified as the best available control technology to control NOx emissions for that particular kiln. [15] In contrast, SNCR was installed on kiln 1 at the Cass County facility as that kiln is configured differently and allowed for the installation of SNCR.[16]

Further, EPA reasonably relied, in part, on the cost-effectiveness standard it determined for EGUs to guide the applicable standard for non-EGUs. It is reasonable in this case for EPA to apply a comparable cost-effectiveness metric across industry, as no single upwind sector should be unduly burdened by a higher cost to control. Further, the cost-effectiveness level is consistent

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[11] *E.g.*, EPA Technical Memo at 3 (Figure 1 depicting record data showing break between cumulative cost per for non-EGU controls at ~ $1900 vs. $5000/ton of NOx); *see* 85 Fed. Reg. at 68,994 (summarizing analysis of average cost per ton of potential NOx reductions).

[12] *See e.g.*, EPA Technical Memo, "Revised Cross-State Air Pollution Rule (CSAPR) Update for the 2008 Ozone NAAQS" (EPA-HQ-OAR-2020-0272) at 6 (Sept. 1, 2020) ("EPA Technical Memo") (Table 4 includes in its assumed "annual emissions reduction potential" one kiln is Maryland that is already controlled and wrongly identifies 13 kilns at the cement manufacturing facility in Alpena County when there are actually only 5 kilns, which are all already controlled) – *see* *https://mde.state.md.us/programs/Permits/AirManagementPermits/Test/Holcim%20Inc%20Renewal%20Title%20V%20Permit%202018.pdf* (permit showing Maryland kiln controlled) and https://www.epa.gov/enforcement/lafarge-north-america-inc-clean-air-act-settlement (listing Alpena County kilns).

[13] EPA Technical Memo. at 22 (Table 12)

[14] *See* Consent Decree, *U.S. v. Esscroc Cement Corp*. (No. 2:11-cv-01650-DSC), available at https://www.justice.gov/sites/default/files/pages/attachments/2017/08/08/env_enforcement-2677705-v1-lodged_3rd_mod_to_cd.pdf (Last visited Dec. 8, 2020)

[15] *See* Letter from Brian Montag, K&L Gates, to Catherine Banerjee Rojko, Senior Attorney, U.S. Department of Justice, and Susan Perdomo, Senior Attorney, U.S. Environmental Protection Agency at 2 (Oct. 12, 2016) (Attached as Appendix)

[16] *Id.*

with the approach EPA followed in previous interstate transport regulations. EPA set the cost effectiveness threshold at $2000/ton under the NOx SIP Call, and at $1400/ton under the 2016 CSAPR Update. The record provides no basis for departing from the range EPA has previously used. In all events, EPA has asked the public to supply contrary information, if any. It is properly the burden of any downwind state or objecting stakeholders to articulate a basis for employing a different – and more burdensome – metric here.

Third, EPA properly found that the non-EGU controls for sources in both EPA's Tranche One and Tranche Two will take at least two years to deploy – and thus cannot be achieved across the relevant states by the next NAAQS deadline in 2021.[17] As EPA logically reasons, an emission reduction strategy is impossible if it cannot be implemented statewide by the relevant attainment date because statewide budgets are based on fleetwide averages. This is particularly the case when addressing an emission reduction strategy consisting of retrofits across multiple industry sectors. The time required for the design, review, application, approval, contracting and deployment of control technology often increases for retrofits when there are frequently unique site-specific configurations.

Indeed, at this time, further uncertainties with supplies and permitting procedures compound the difficulties with deploying controls any sooner than within two years, if a mandate were imposed across industrial sectors in the identified upwind states. The COVID-19 global pandemic has disrupted supply chains across the globe, including those involved in the supply and manufacturing of pollution control equipment. These impediments will likely continue through 2021, given the anticipated need to address the significant backlog of equipment orders and deferred investments. Further, state permitting agencies have lost substantial resources during the pandemic, which would extend the timeline for the prerequisite permit reviews necessary to implement pollution control projects. Without the complications caused by COVID-related disruptions, designing and retrofitting non-EGUs with pollution controls exceeds two years. The additional complications push the retrofit timelines significantly further into the future (more than 12 months).

Fourth, EPA should likewise retain its determination that the additional non-EGU controls that could be installed by 2023-2024 do not "significantly" reduce contributions to nonattainment or interference with maintenance at downwind receptors to warrant mandating such controls. EPA's modeling predicts, when factoring in the emissions reductions contemplated under the Proposed Rule, that all downwind receptors will achieve compliance with the 2008 NAAQS in 2025, with only a single receptor in Connecticut projected to have residual attainment issues in 2023 and only a maintenance issue in 2024. Imposing additional controls on non-EGUs would not mean earlier downwind compliance at any receptor or otherwise change the compliance status for that single receptor in either 2023 or 2024 – and would have less than a 0.05% effect on the projected design value.[18]

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[17] *Wisconsin v. EPA*, 938 F.3d 303, 320 (D.C. Cir. 2019) (EPA can adjust compliance deadline, provided it can demonstrate an impossibility or other necessity).

[18] *See* 85 Fed. Reg. at 69,003 ("the total improvement in air quality from these emissions reductions is 0.03 ppb."), *and* Technical Support Document for the Proposed Revised CSAPR Update for the 2008 Ozone NAAQS, EPA-HQ-OAR-2020-0272 at 49 (Oct. 2020) (Tables D-16 to D-19).

Without other highly cost-effective options for non-EGUs, it is reasonable and appropriate for EPA to conclude the non-EGU controls would not rise to the level of significance to mandate the concomitant investment in new controls. The Good Neighbor provision expressly prohibits emissions in "amounts which will … *contribute significantly*" to nonattainment or interference with maintenance in a downwind state, 42 U.S.C. § 7410(a)(2)(D)(i) (emphasis added), and EPA has long considered a variety of factors in analyzing whether the emissions at issue "contribute significantly." For example, in the NOx SIP Call EPA determined that § 7410(a)(2)(D)(i)(I) allows consideration of "factors other than air quality" when determining "significant contribution" – "including cost." 64 Fed. Reg. 28,250, 28,285 (May 25, 1999) (adopting "multi-factor approach to assess whether there is a significant contribution,"). Moreover, the courts have repeatedly sustained EPA's multi-factor approach.[19] Hence, when evaluating "highly cost-effective" controls at Step 3, EPA has found it must assess feasible emission control strategies available at the named sources, the costs of implementing those control strategies, the amount of potential emissions reductions from implementing those control strategies at upwind sources, the potential downwind air quality improvements from such emissions reductions, and whether the reductions would resolve – or would do more than necessary to resolve (i.e., entail prohibited over-control for) – the asserted downwind air quality problem.[20]

Applying EPA's multi-factor approach here, the *de minimis* effect on downwind air quality from imposing the controls provides ample support for EPA's analysis.[21] Indeed, requiring additional controls is predicted to result in such small upwind emission reductions that the controls would in no way change or materially improve the downwind attainment status of the one receptor.[22] Moreover, evaluating emissions transported across hundreds of miles requires consideration of thousands of "overlapping and interwoven linkages" among sources and downwind receptors, with such detailed consideration demanding "complex modeling to establish the combined effect" in downwind states.[23] In that context, it is even more reasonable to decline to require controls given the very small predicted effect from their imposition.

Fifth, at Step 3, EPA conducted its analysis using the "best information currently available to the agency." 85 Fed. Reg. 68968. As such, EPA properly considered projected changes in activities, predicted emissions reductions from on-the-books actions, planned emission control installations, and promulgated federal measures that affect anthropogenic emissions, projections from national and local rules, control programs, plant closures, consent

[19] *EME Homer City*, 572 U.S. at 518–20 (upholding EPA interpretation of "contribute significantly" in Cross-State Air Pollution Rule, 76 Fed. Reg. 48,208 (Aug. 8, 2011)); *Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1049–50 (D.C. Cir. 2001) (upholding EPA interpretation of "contribute significantly" in reviewing denial of section 126(b) petitions).

[20] 84 Fed. Reg. at 56,082–83 (describing "cost and air quality factors" considered at Step 3).

[21] It is well settled that EPA has authority to decline to regulate or create exceptions for certain *de minimis* levels of emissions. *UARG v. EPA*, 573 U.S. 302 (2014) (sustaining EPA's authority to establish an appropriate de minimis threshold, if EPA provides a justification), *citing Alabama Power v. Costle*, 636 F.2d 323, 360-61 (D.C. Cir. 1979) (affirming "when the burdens of regulation yield a gain of trivial or no value.").

[22] *EME Homer City*, 572 U.S. at 522 (requiring upwind emission "reductions unnecessary to downwind attainment" constitutes proscribed "over-control")

[23] *EME Homer City*, 572 U.S. at 497, 501 and 516 ("The realities of interstate air pollution … are not so simple.").

decrees, settlements, reductions from federal standards (e.g., NESHAP), and EISA (Energy Independence and Security Act of 2007) requirements for refineries. 85 Fed. Reg. at 68982-83. EPA also considered facility permits and industrial trade literature to verify and determine whether estimated emissions reductions were actual, achievable reductions. 85 Fed. Reg. 68999. These are all real-world emissions changes that are appropriate for EPA to consider. Even with these multiple data sources, EPA recognizes that its information is still not complete – and has asked stakeholders for input.

EPA's outreach further highlights why its approach to non-EGU sources is correct, as an agency should not impose new requirements on regulated parties where it lacks information to justify the regulation. Here, as EPA has conducted modeling and gathered an extensive record, it is now properly the downwind stakeholders' burden to offer additional information for the agency to justify imposing additional emissions reduction requirements on non-EGU sources.

Conclusion

In sum, the Associations support EPA's proposal not to control non-EGUs in this revised CSAPR Update. The Agency correctly found that it is impossible for non-EGUs to install controls by 2021 and that non-EGU sources that could install controls by 2023 would not contribute significantly to downwind nonattainment with the 2008 ozone NAAQS in 2023 or later. As such, the Proposed Rule should be finalized without requiring additional controls for non-EGU sources.

Respectfully submitted,

American Fuel & Petrochemical Manufacturers
American Petroleum Institute
Portland Cement Association
American Chemistry Council
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Appendix

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October 12, 2016

Via Electronic and Overnight Mail

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Re: Essroc Cement Corp. – Consent Decree
Civil Action No. 2:11-cv-650-DSC
Logansport: Kiln #2 SNCR

Dear Cathy and Susan:

I am writing to you in connection with the Consent Decree entered into between Essroc and USEPA, lodged on December 29, 2011 (the "Consent Decree"), and in follow-up to our October 4, 2016 conference call concerning Essroc's Logansport facility.

As you know, I represent Lehigh Hanson Inc, which is a subsidiary of Heidelberg Cement AG. As we also have advised you, Heidelberg and Essroc's ultimate parent, Italcementi S.p.A. are currently engaged in a series of transactions, the result of which will be that Heidelberg will acquire all of the stock of Italcementi. As such, I am assisting Lehigh Hanson/Heidelberg as outside counsel to handle all legal matters related to the Consent Decree going forward for Essroc.

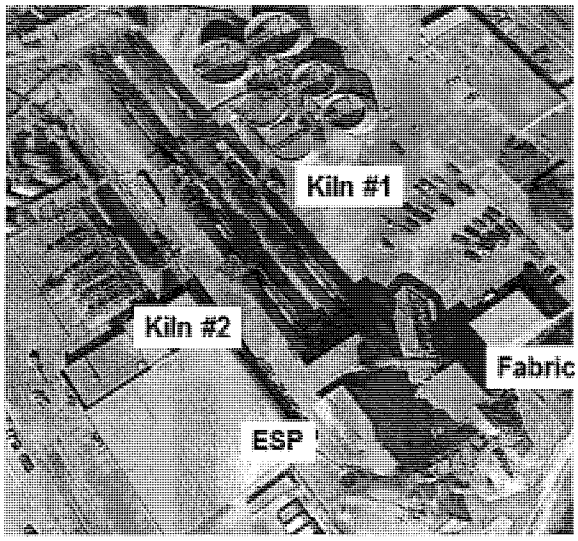
EPA Regions III, V and HQ met with Essroc and Lehigh Hanson on August 5, 2016 to discuss various subjects relating to the Consent Decree. Representatives of EPA, Essroc and Lehigh Hanson also discussed follow-up issues related to Logansport on October 4, 2016 - at which time we indicated we would advise you, in writing, with regard to the status of SNCR related to Kilns #1 and #2.

Specifically, Essroc informed the group of Kiln #1 SNCR's rotary coupling failure at Logansport. The rotary coupling has been repaired and restarted normal operation on September 1, 2016.

Per the modified Consent Decree, Essroc is required to install and begin operations of an SNCR on Kiln #2 by March 31, 2017. Due to the physical differences described during the meeting and included as Appendix 1, SNCR cannot be installed on Kiln #2 as currently configured.

Kiln #1 exhaust gases exit the kiln and are ducted in an upward direction. The SNCR is located on the backside of the kiln exhaust duct. The kiln exhaust duct is configured in a V-shape and the SNCR was able to be installed in the crouch of the duct. Kiln #1 gases are dedusted in a baghouse, which is off-set from the kiln exhaust. This allowed for the installation of the rotary coupling for the SNCR.

Kiln #2 exhaust gases exit the kiln horizontally and are ducted directly into the electrostatic precipitator (ESP) used to dedust the kiln exhaust gases. A short piece of horizontal ducting connects the kiln exhaust to the ESP. An SNCR system can't be installed in this short piece of ducting, since there is no place to install the SNCR rotary coupling.



In the original 2011 Consent Decree, EPA and Essroc agreed on a backstop of 7.0 lbs. NOx/ston clinker. At that time Essroc was not burning 100% hazardous waste fuel in the kilns. Essroc is currently burning 100% hazardous waste fuel in both kilns. The hazardous waste fuel has a moisture content of 20 to 25%. Traditional fuel, coal, is fired with less than 2% moisture.

From January 1, 2016 to July 1, 2016, Kiln #2 emitted 93.7 tons of NOx emissions and produced 36,392 tons of clinker yielding a specific NOx emission rate of 5.15 lb. NOx /ston clk, which is a 21% reduction from the backstop.

It has been demonstrated kiln flame cooling with water sprays has reduced NOx emissions. Most cement kilns abandon this technology, since the water vaporized and exhausted through the dust collection system. This exhaust caused a reduction in volume or a loss of clinker capacity.

At Logansport, the water in the hazardous waste fuel has caused a reduction in clinker capacity, but also has reduced its NOx emissions.

If a true baseline without ammonia introduction was to occur, the Logansport kilns would have to switch back to conventional fuels. Since a baseline should not be established using an alternate fuel such as hazardous waste fuels. These alternate fuels could be discontinued at any time due to availability, or a change in permit conditions or permit renewals. These kilns would need to resort back to the conventional fuels. The NOx emissions would then increase to a traditional level and the SNCR system would not be capable of achieving these low NOx emissions using a combination of SNCR and alternate fuel to control NOx emissions.

In order to move forward with Kiln #2, Essroc is proposing to accept a NOx limit of 5.25 lbs. NOx/st clk. The control technology to be imposed is water in lieu of SNCR. Essroc will regulate the fuel moisture to control NOx emissions. As discussed previously, this will have a cost to Essroc, which is lost clinker production. Essroc believes this is a technology approach to resolving the inability to install SNCR on Kiln #2.

With reference to Kiln #1, Essroc will continue on its current approach using SNCR. Clinker loss will not be as significant on Kiln #1, since SNCR will be used to trim the NOx emissions already reduced with the moisture in the hazardous waste fuel.

During the meeting, we had suggested the idea of inserting urea prills mid-kiln. After doing additional research, this technology may not be acceptable due to non-continuous injection of urea prills and the need to convert urea back to ammonia using water. At this time, Essroc would like to place exploring this technology on hold.

If EPA is willing to accept the moisture in the hazardous waste fuel as a control technology and a 30 day rolling limit of 5.25 lbs. NOx/st clk, Essroc would propose to implement this limit on Kiln #2. Essroc is also open to accepting a similar limit on Kiln #1 with the control technology being both SNCR and moisture in the hazardous waste fuel.

As discussed during our October 4th conference call, we understand you wish to further consider Essroc's proposal and the information presented herein. Thereafter, we understand EPA will contact us to further discuss this matter.

Please also note, we understand EPA had to cancel meeting us at the Logansport facility on October 4th due to budget related issues. If you are able to reschedule that meeting at Logansport, we would of course welcome meeting you there so we can review Kiln #2 with you first-hand.

Essroc looks forward to exploring this concept with EPA and discussing these issues with you further.

Very truly yours,

Brian S. Montag

cc: Mr. Shaun Burke
See Attached Distribution List Pursuant to Section XIX of the Consent Decree

Distribution List Pursuant to Section XIX of the Consent Decree

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