



REGION 6

DALLAS, TX 75270

June 14, 2024

Bryan Johnston
Administrator, Air Permits
Environmental Services
Louisiana Department of Environmental Quality

Via email bryan.johnston@la.gov

Re: Agency Interest 1388 Atalco Gramercy LLC Atlantic Alumina - Gramercy Operations, Bauxite Processing, Products, and Power Area Proposed Permit 2453-V14 Activity Number PER20220002.

Dear Bryan,

The United States Environmental Protection Agency (EPA) has evaluated the permit for the Atalco facility in Gramercy, Louisiana. This letter provides comments (see Enclosure) on the proposed permit, including permit conditions related to the facility demonstrating compliance with particulate matter, including particulate matter greater than 2.5 microns (PM_{2.5}) in diameter from the numerous material handling sources and PM_{2.5} from the combustion units. We are also providing our concerns and recommendations related to the effects of the release of mercury and particulate matter and their impact on the broader community as summarized below.

Public Hearing

We acknowledge that LDEQ previously took early action to reduce mercury emissions when the emissions of mercury were first identified by the company. Given the concerns expressed by the nearby communities **we recommend** that LDEQ hold a public hearing on this permit. The public hearing should include an assessment and explanation of air toxics risk posed by such emissions to the affected communities and steps that LDEQ and the company have taken to reduce emissions. Over the last 10 years community members have stated concerns related to the characterization and proposed control of mercury emissions emanating from bauxite processing and alumina production at the facility.

Mercury Emissions Reduction

We appreciate LDEQ's actions to continue to work with Atalco to reduce mercury emissions in the Mississippi River corridor as part of statewide efforts to reduce mercury impacts to water bodies and on fishery resources that the public utilizes in Louisiana. The first ever mercury-based Fish Consumption Advisory for Lake Maurepas (co-signed by Secretary Giacometto on April 17, 2024) reminds us that all mercury releases to the environment have significant long-term consequences. Specifically, air emissions of mercury can be controlled to achieve our common goal of mitigating future impacts. In addition, the State issued a fish consumption advisory on July 29, 2021 for the Blind River north of the Atalco facility. Given LDEQ's ongoing actions, we do wonder if there is data to inform

the need for a fish consumption advisory for the Mississippi River. Of note, one example of other state agencies along the Mississippi River informing the public of efforts to update fish advisories (see <https://dnr.wisconsin.gov/topic/Watersheds/basins/mississippi/fish.html>) could be a valuable resource for LDEQ to share similar but state-specific information with communities along the Mississippi River. Therefore, EPA strongly encourages LDEQ to continue to work with Atalco and other industries to reduce mercury emissions in the Mississippi River corridor. Doing so will continue to mitigate the negative consequences of mercury emissions to the air impacted tributaries such as, for example, the Blind River with headwaters just north of the Atalco site that feeds into Lake Maurepas.

Particulate Matter and Air Toxics Impact

We are aware that local citizens have reported to the EPA concerns regarding particulates and dust inhalation. Community members have indicated that their pets routinely have red dust on their paws and coats. While EPA is conducting the Louisiana Cumulative Impact Assessment in Saint John the Baptist Parish to determine exposure to mercury and other pollution impacts to citizens in the area, **we recommend** that LDEQ conduct a dust study in residences adjacent to the facility to evaluate the impact, including mercury impacts, associated with such particulate deposition. **We also recommend** LDEQ evaluate mercury related impacts on the local food chain (i.e., vegetable gardens, cattle, chickens, and fish). In consideration of these concerns, EPA believes that the current 1200 pounds per year cap is still too high given current technological advances in controlling mercury emissions.

Implementation of Mercury Control Technologies

We agree with the permit provision mandating controls on the digester vent by the end of the 2024 calendar year. That provision results from the multi-year study undertaken by Atalco through the agreement signed in 2015 with the LDEQ to seriously explore further mercury emissions reductions from the Atalco operation. While we acknowledge the complexities involved in the selection and implementation of control technologies for the process type in question, we are aware that efficacious control technologies have been identified in the literature for over 20 years by the bauxite processing industry utilizing the Bayer process worldwide. For example, alumina refineries in Australia of comparable processing capacity, such as the Worlsey Alumina Refinery in Allanson, of Western Australia or the Alcoa Pinjarra Alumina Refinery also in Western Australia mandate mercury controls for the Bayer process digester emissions. Consequently, if a non-mercury containing feedstock cannot be implemented in whole or part, **we strongly recommend** LDEQ ensure that Atalco implements the most promising of the other technologies that Atalco has reported, or that have been achieved at other bauxite refineries internationally, thus achieving as much as 99% actual emissions reduction¹. As another example, given the low flows and temperatures, EPA would suggest consideration of something like stand-alone sorbent impregnated modules instead of bags, such as that implemented in the Gore Mercury Control Module system.² Once again, we strongly encourage LDEQ to pursue with Atalco the pollution control option(s) that will result in the maximum control of mercury emissions.

¹ Emission reductions of up to 99% have been achieved using a combination of mercury condensation followed by vent stream incineration with carbon injection and baghouse controls.

² An example of a mercury control system that has been used in the coal fired power generation and cement industries is known as the Gore Mercury Control System. This type of technology has achieved mercury emissions reductions of between 40 and 85% in those sectors. Efficiency may be tested by EPA Method 30B with ongoing monitoring using Method PS-12B.

Mercury Monitoring

Upon installing and ensuring the new controls are fully operational, **we recommend** LDEQ conduct additional ambient monitoring or mobile monitoring adjacent to the site to determine if the levels have been further reduced from historical monitored values and to model the impacts of mercury emissions on the nearby communities; moreover, **we recommend** that LDEQ make such information available to the community. **We recommend** requiring Atalco to conduct ongoing stationary monitoring for mercury, including fence-line monitoring, as a solution for ensuring protection of the communities and for assuring the company achieves ongoing mercury reductions. We offer our concern for the emissions that leave the property from *any activity onsite*, for example, emissions not just from normal facility operations, but also from upset events that expose workers to hazards as well as offsite receptors.³ Another option is to conduct initial and ongoing stack monitoring using sorbent traps (per EPA Method 30B and PS-12B, respectively). We offer this option for your consideration since the sorbent traps can be used during periods of startup, shutdown, or malfunction to provide valid data as long as there is no breakthrough – which can be mitigated by exchanging sorbent traps out earlier than their useful duration of fourteen days.

Particulate Matter and Air Toxics Emissions

Finally, while mercury is an important contaminant, it is not the only pollutant of concern from the Atalco site. The steps taken in this permit action better characterizes and more frequently measure particulate matter emissions, including fine particulate matter from the combustion and material handling sources at the site, will aid LDEQ in ensuring that St James and St. John the Baptist Parishes maintain the National Ambient Air Quality Standards for Fine Particulate recently promulgated. Ongoing characterization of air toxics emissions from the site will be invaluable to the communities potentially impacted by the operation of this site. To this end, we have provided our comments and recommendations, related to measurement, monitoring, and recordkeeping.

EPA appreciates the opportunity to comment on the preconstruction and part 70 related elements of the permit.

Sincerely,

Cynthia Kaleri
Section Supervisor, Air Permits Section

Enclosure

³ EPA is aware of the very serious violations of health and safety, over 100 violations during a four and one half year timeframe and many as recently as May of this year, documented by the U.S. Mine Safety and Health Administration.

ENCLOSURE

EPA Comments on Proposed AI 1388 Atalco Gramercy Operations Title V and Preconstruction Permit 2453-V14 Permit Activity PER20220002

1. **Specific Requirements 1-5.** We recommend that the performance tests required under 40 CFR Subpart LL for the scrubbers in Group CRG 003 be repeated at least once every five years and correlations and emissions factors be updated with those repeat performance tests in the permit for all the operations controlled by scrubbers. This will enhance the periodic monitoring as required under 40 CFR Part 70.
2. **Specific Requirement 24.** Is there a rationale why the sulfur emissions from the EQT0214 gas turbine are not included in the compliance demonstration for sulfur dioxide emissions? Please either include the source in the demonstration or provide a reasoned explanation as to why doing so is unnecessary.
3. **Specific Requirement 25.** When the term PM is used, does that indicate that performance testing must be conducted and reported as PM, PM₁₀ or PM_{2.5}, or some combination thereof? Please clarify. Are sources subject to performance testing within 80% of permitted load or 10% of achievable load required to be performance tested if operating conditions rise to above those levels of permitted load? If not, how does the source demonstrate that emissions at the increased load range are compliant with the emissions limits? In the case that the source can no longer achieve the load upon which the current emissions are based, what is the mechanism that LDEQ uses to reduce the permit allowable based on loss of capacity?
4. **Specific Requirement 26 and 28.** Please clarify why no means of determining the operating rate are required in an ongoing fashion if the most recent test was at least 80% of permitted load? How is the operating rate to be determined in those cases? How is the integrity of the emissions estimates based on testing within a given load range of operations to be assured, if an accurate operating rate is not required and the emissions unit is operated outside of that range for which the prior performance test results were based? What is the basis to assume that the emissions would be linearly related to the operating rate in those circumstances? Please clarify why no such requirement is necessary or include such requirement in the permit.
5. **Specific Requirement 55.** It is unclear if this requirement is intended to address an ESP as a whole for a given unit, or to each bank of a given unit given that some if not all banks of a unit may be offline or not performing

properly when the source being controlled by the ESP is operating. Please clarify why this condition should not apply to each bank or operational subset of an ESP or specify it in the permit. In addition, we believe that the definition of deviation should include the circumstances when one or more ESP banks is not operational during process unit operations.

6. **Specific Requirement 75.** We could find no indication of when the stack test required by LL was conducted, nor of the operating ranges in which compliance is to be demonstrated. In consideration of our Comment 1 above, we also recommend including a performance test requirement and subsequent reporting of results for at least once each five-year period in the permit for the unit or describe why one is not required.
7. **Specific Requirement 85 thru 89.** You may wish to consider confirming the demonstrations of compliance with the mercury emissions limits for the Relief Tank be based on EPA Reference Method 30B initially and Method PS-12B in an ongoing fashion utilizing sorbent traps. While the site as a whole is represented as a minor source of Toxic Air Pollutants and Hazardous Air Pollutants, we recommend that a provision in the permit require that mercury emission from the relevant source(s) be included in the point source inventory for the site, as is permissible under LAC 33:III. 919.A.1.f. Transparency and accessibility of emissions estimating methods and records should be made available timely to the public along with the annual emissions from the site. Finally, we recommend that these requirements not be marked as state only.
8. **Specific Requirement 124.** Time should be recorded of ESP operation for each kiln including operational status of each independent bank identified per each ESP per each ESP operational hour. Without this information being recorded and reported, there is no clear indication of compliance with the control requirements and consequent emissions.
9. **Specific Requirement 125.** The test method to be used to report $PM_{2.5}$ should be specified in the requirement, as Method 5 as specified does not appear to report $PM_{2.5}$ emissions. Please include reference methods as appropriate to accurately report PM, PM_{10} and $PM_{2.5}$ emissions. In addition, the provision is unclear how the source is to determine compliance in an ongoing fashion for each kiln. Please explain how ongoing compliance is to be determined. Finally, the comment on Specific Condition 25, above, also applies to representative stack testing of this Specific Requirement.

10. **Specific Requirement 154.** As identified in Specific Requirement 87 and 88, above, we recommend that LDEQ include the requirement to report mercury emissions in the annual inventory in addition to requiring recordkeeping on site or reported to the LDEQ independent of the emissions inventory.