

March 25, 2011

Ms. Thu Bui  
Senior Air Quality Engineer  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109  
tbui@baaqmd.gov  
*Submitted via electronic mail*

**RE: Comments on the Proposed Renewal of the Clean Air Act Title V Permit for the Lehigh Southwest Cement Company Permanente Plant, Application No. 17947**

Dear Ms. Bui:

Thank you for the opportunity to comment on the proposed renewal of the Clean Air Act Major Facility Title V Permit (“Draft Permit”) for the Lehigh Southwest Cement Company Permanente Plant (“Facility”). San Francisco Baykeeper (“Baykeeper”) submits these comments on behalf of our 2,300 members that live and recreate in and around the San Francisco Bay. Baykeeper is a 501(c)(3) non-profit organization with the mission of protecting and enhancing the water quality of the San Francisco Bay for the benefit of its ecosystems and surrounding communities. With the goal of minimizing hazardous air emissions and dust from the Facility that adversely impacts water quality, Baykeeper submits the following comments.

**1. The Draft Permit Fails to Include Deadlines for Permit Compliance.**

**A. The Draft Permit Must Require the Facility to Install All New Emission Control Technologies by September 9, 2013.**

All existing sources of mercury, particulate matter, total hydrocarbons, and hydrochloric acid emissions, like the Facility, must comply with the Environmental Protection Agency’s (“EPA”) recent amendments to the National Emission Standards for Hazardous Air Pollutants from the Portland cement manufacturing industry (“NESHAP amendments”) by September 9, 2013. 40 C.F.R. § 63.1351(b). The Statement of Basis for the Draft Permit states that the Facility is “pro-actively” making changes to its cement-making process to meet the revised standards. Statement of Basis, page 6. However, this vague statement is not a sufficient explanation of how the Facility plans to comply with the NESHAP amendments by the statutory deadline. Instead, the Draft Permit must specifically identify an installation deadline for all new emission control technologies and equipment modifications that the Facility plans to rely on for permit compliance that falls well ahead of the September 9, 2013 compliance date. Compliance with these deadlines must be demonstrated through a timely reporting requirement added to the Draft Permit.

For example, the Statement of Basis asserts that the Facility plans to install an activated carbon injection (“ACI”) system to reduce mercury emissions, but the Facility has completed only test

trials for this new system to date. *Id.* To ensure compliance with the NESHAP amendments by September 9, 2013, the Draft Permit must include a concrete deadline for installing the complete ACI system. This deadline should fall at least six months before the compliance date, providing the Facility with more than enough time to test the new system's ability to reduce mercury emissions.

**B. The Draft Permit Must Require the Facility to Meet Interim Deadlines to Ensure Compliance with the New Emission Standards by September 9, 2013.**

The Draft Permit does not include any standards, requirements, or deadlines to help the Facility comply with the NESHAP amendments by September 9, 2013. Since the EPA's new emission standards are far more stringent than its previous standards for the Portland cement manufacturing industry, interim deadlines are crucial for ensuring compliance. For example, the Facility is planning to install complex emission control technologies to reduce mercury emissions from the Facility by over 90 percent, which could take years to construct. *Id.* at 5-6. According to the EPA, it typically takes about three years to install an ACI system. 75 Fed. Reg. 54979 (Sept. 9, 2010). Since the Facility has yet to start constructing its permanent ACI system, the Facility may not be able to meet the 2013 compliance deadline if the District does not set strict interim deadlines.

In addition, the District should require the Facility to prepare a progress report that describes the advancement of its emission control technologies at least two times a year. These progress reports should be made available to the public and should be posted on the District's website.

**2. The Draft Permit Fails to Place a Cap on Mercury Emissions.**

Mercury is an extremely hazardous pollutant that is highly present in the Facility's emissions. According to the EPA, human exposure to mercury can damage the nervous system, brain, heart, kidneys, lungs, and immune system. The most common way that people are exposed to mercury is by eating fish or shellfish that are contaminated with mercury. Mercury is also harmful to wildlife. Animals that eat fish or prey on fish-eating species are at risk of reduced fertility, slower growth and development, behavior abnormalities that affect survival, and even death.<sup>1</sup>

Once mercury is emitted into the air, it ultimately impacts aquatic ecosystems by entering waterways via a process known as atmospheric, or aerial, deposition. Aerial deposition occurs when airborne pollutants settle directly onto the surface of a water body or reach a water body indirectly by falling onto land surfaces and subsequently washing off during storm events. Aerial deposition is increasingly recognized as a significant cause of water quality impairment, acidification, and toxic contamination of fish and their predators.<sup>2</sup>

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<sup>1</sup> For more information on the harmful effects of mercury, see EPA, Mercury, <http://www.epa.gov/mercury/> (last visited Mar. 24, 2011).

<sup>2</sup> See EPA, Frequently Asked Questions About Atmospheric Deposition: A Handbook for Watershed Managers, 2 (2001), [http://epa.gov/owow/airdeposition/airdep\\_sept\\_final.pdf](http://epa.gov/owow/airdeposition/airdep_sept_final.pdf) (last visited Mar. 24, 2011).

The waterways surrounding the Facility are already greatly impaired by mercury pollution. According to a study conducted by the California Water Resources Control Board, all but one of the fish tested from Stevens Creek Reservoir, a water body approximately two miles from the Facility, had mercury concentrations that exceeded both the EPA and the California Office of Environmental Health and Hazard's standards for safe fish consumption.<sup>3</sup> Even more, the close by San Francisco Bay is burdened by a TMDL for mercury, showing the severity of its mercury contamination.<sup>4</sup> This TMDL does not account for the pollution that results from aerial deposition of mercury emitted from the Facility or other plants around the Bay Area. As a result, the continued operation and expansion of the Facility will contribute to further mercury contamination in these waterways if the District does not place an annual cap on the Facility's mercury emissions.

The new EPA standards for hazardous air pollutants measure mercury emissions by million tons of clinker produced, allowing the Facility to continue to increase its mercury emissions as it expands and produces more clinker. It is clear that the Facility plans to expand its cement manufacturing operations in the near future – the Facility recently filed an application to amend the 1985 Reclamation Plan for its onsite quarry, which would allow the Facility to expand its mining operations and production capacity with a new 251 acre limestone quarry. This expansion will greatly impact the already mercury impaired waterways surrounding the Facility. Therefore, the District must include a cap on total annual mercury emissions in the Draft Permit to ensure that the Facility does not contribute to the further impairment of the surrounding waterways.

The District's duty to place a cap on the Facility's mercury emissions stems from the public trust doctrine. Under the public trust doctrine, the state has an "affirmative duty" to protect public trust resources<sup>5</sup> and uses<sup>6</sup> whenever feasible. *National Audubon Society v. Superior Court*, 33 Cal. 3d 419, 446 (1983). This affirmative duty is delegated to all California state agencies, including the District: "The interests encompassed by the public trust undoubtedly are protected by public agencies acting pursuant to their police power and explicit statutory authorization." *Center for Biological Diversity v. FPL Group, Inc.*, 166 Cal. App. 4th 1349, 1365-6 (2008). Therefore, the District has an affirmative duty to do whatever it can to protect the waterways surrounding the Facility by, in this case, taking action to decrease future mercury emissions from the Facility.

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<sup>3</sup> California Surface Water Ambient Monitoring Program, Concentrations in Fish Tissues from Selected Reservoirs and Coastal Areas in the San Francisco Bay Region, 19 (May 2005), *available at* <http://www.waterboards.ca.gov/sanfranciscobay/docs/RB2Fish%20Report%20Final2007.pdf>.

<sup>4</sup> For more information on the San Francisco Bay's mercury TMDL, see San Francisco Bay Regional Water Quality Control Board, San Francisco Bay TMDL, [http://www.swrcb.ca.gov/sanfranciscobay/water\\_issues/programs/TMDLs/sfbaymercurytml.shtml](http://www.swrcb.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/sfbaymercurytml.shtml) (last visited Mar. 25, 2011).

<sup>5</sup> Public trust resources include wide-ranging water resources: "[The public trust doctrine] is an affirmation of the duty of the state to protect the people's common heritage of streams, lakes, marshlands and tidelands." *Center for Biological Diversity v. FPL Group, Inc.*, 166 Cal. App. 4th 1349, 1365-6 (2008).

<sup>6</sup> The water-related uses protected by this powerful doctrine are diverse, including fishing, ecological preservation, swimming, bathing, scientific study, and recreation. *Marks v. Whitney*, 6 Cal. 3d 251 (1971).

**3. The Draft Permit Fails to Describe the Facility’s New Emission Monitoring and Reduction Systems with Sufficient Detail.**

**A. The Draft Permit Must Require the Facility’s New Continuous Emission Monitoring Systems to Comply with All Standards Set Forth in the NESHAP Amendments.**

The NESHAP amendments contain several new requirements for monitoring emissions from facilities that manufacture Portland cement. If a facility decides to comply with these requirements by installing continuous emission monitoring systems (“CEMSs”) to monitor particulate matter, total hydrocarbons, mercury, and hydrochloric acid emissions, each CEMS must comply with specific statutory requirements: (1) A particulate matter CEMS must be installed and operated in accordance with Performance Specification 11 of appendix B and Procedure 2 of appendix F to Code of Federal Regulations (“C.F.R.”) chapter 40, part 60; (2) a total hydrocarbons CEMS must be installed and operated in accordance with Performance Specification 8 of appendix B to C.F.R. chapter 40, part 60; (3) a mercury CEMS must be installed and operated in accordance with Performance Specification 12A of appendix B to C.F.R. chapter 40, part 60; and (4) a hydrochloric acid CEMS must be installed and operated in accordance with Performance Specification 15 of appendix B to C.F.R. chapter 40, part 60. 40 C.F.R. § 63.1350(b)(1), (i)(1), (k), (l)(1).<sup>7</sup>

According to the Draft Permit’s Statement of Basis, one way that the Facility plans to comply with the new emission standards is by installing CEMSs to monitor the Facility’s mercury, particulate matter, total hydrocarbons, and hydrochloric acid emissions. Statement of Basis, page 8. However, the Draft Permit does not describe the standards for any of these monitoring systems. For example, the Statement of Basis refers to the Facility’s future mercury CEMS by simply stating that it will “add a mercury CEM system.” *Id.* This brief discussion of CEMSs in the Statement of Basis is not sufficient to show that the Facility will be able to fully comply with the requirements for monitoring systems outlined above. The Draft Permit must incorporate all requirements set forth in 40 C.F.R. § 63.1350 and describe each CEMS with further specificity.

**B. The Draft Permit Must Describe All of the Facility’s New Emission Control Technologies.**

The District updated Table II B of the Draft Permit, which lists all emission abatement devices used by the Facility, after it revised the Draft Permit to reflect the 2010 NESHAP amendments. However, the District failed to include all emission control technologies that the Facility plans to employ to meet the EPA’s new standards for Portland cement manufacturing facilities. The Table now lists the Facility’s future lime slurry injection system as an abatement device, but does not include the other technologies that the Facility will use to reduce mercury emissions. Proposed Permit, page 17. The District must update the Draft Permit so Table II B also includes the Facility’s future ACI and kiln mill dust collector systems.

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<sup>7</sup> The NESHAP amendments contain additional requirements for the installation and operation of particulate matter, total hydrocarbons, mercury, and hydrochloric acid CEMSs. Please see 40 C.F.R. § 63.1350 for a full description of all standards that the Facility’s new CEMSs must follow.

**4. The Draft Permit Must Include Additional Measures to Ensure that Particulate Matter Emissions Do Not Increase from Activated Carbon Injection.**

Injections systems are effective tools for reducing hazardous air emissions, but can cause a facility to emit additional particulate matter as a result. Since the Facility plans to install a permanent ACI system to reduce mercury emissions and a hydrated lime slurry injection system to reduce hydrochloric acid emissions, yet must also reduce particulate matter under the NESHAP amendments, the District must require the Facility to install additional technologies to keep its particulate matter emissions under control. For example, the District could require the Facility to install a particulate matter monitor to study the emissions that result from the ACI system. In addition, the District could require the Facility to increase the collection efficiency of its existing particulate matter control devices.

**5. The Draft Permit and Dust Control Plan Are Not Sufficient to Control Dust Emissions from the Facility.**

The dust produced by the Facility's cement manufacturing, storing, and transporting activities seriously impacts the residents, ecosystems, and water quality of the Bay Area. There are numerous studies that show a link between exposure to cement dust and chronic respiratory problems in human populations. Cement dust also impacts waterways by increasing sedimentation and contamination of hazardous heavy metals like nickel, lead, chromium, and cobalt.<sup>8</sup> During a six year compliance review, the Facility was issued 13 Notices of Violation for producing excessive dust emissions and utilizing unpermitted storage piles, showing that the Facility's operations are harmful to the surrounding land and aquatic communities. Statement of Basis, Appendix A, Table 1.

To address the Facility's recurring problem with dust emissions, the District added a condition in the Draft Permit that requires the Facility to maintain and comply with a Dust Control Plan. *Id.* at 7. While this is a good start to helping the Facility better control dust emissions, the District must also require the Facility to implement all dust control methods set forth in the NESHAP amendments. According to the new standards for clinker storage and handling areas, all clinker storage activities that occur within 1000 feet of the Facility's property line must be fully enclosed. 40 C.F.R. § 63.2343(d). If storage activities are located more than 1000 feet from the Facility's property line, the Facility must comply with numerous special procedures to control dust emissions. See *Id.* § 63.2343(c)(1)-(4). The Draft Permit does not reference any of these new dust control standards and does not indicate how the Facility will comply with the standards. Therefore, the District must revise the Draft Permit to clearly indicate where clinker storage activities are conducted on the Facility's property and indicate which standards apply to each storage area to avoid future violations of emission standards.

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<sup>8</sup> For a summary of studies evaluating the impacts of cement dust, see Vijai Shanker Singh & Deep Narayan Pandey, Human Health Risk due to Cement Dust Exposure: Policy-Brief (2011), *available at* [http://210.212.96.131/rpcb/ReportsAndPaper/RSPCB\\_CEMENT\\_DUST\\_PolicyBrief.pdf](http://210.212.96.131/rpcb/ReportsAndPaper/RSPCB_CEMENT_DUST_PolicyBrief.pdf).

**6. The Draft Permit Must Require the Facility to Test All Emission Control Devices on At Least an Annual Basis.**

The Draft Permit requires the Facility to test emission sources with a varied frequency. Some sources must be tested annually, while other sources only have to be tested once every five years. See, for example, Draft Permit, Section IV; Statement of Basis, pages 64-65. The District should instead use consistent standards for source testing to ensure that the Facility is in compliance with the average monthly emission standards in the NESHAP amendments. For example, the District could require the Facility to test all emission sources not monitored by CEMSs on a monthly or annual basis.

**7. The Draft Permit Must Not Allow the Facility to Increase its Fuel Burning Capacity.**

In May 2007, the District allowed the Facility to increase its fuel burning capacity from 8 tons of petroleum coke per hour to 20 tons of petroleum coke per hour. Statement of Basis, page 4. Prior to this change, the Facility primarily used coal to fuel its cement manufacturing activities. Bay Area Air Quality Management District, Fact Sheet, page 2 (2010). The District made this decision without allowing the EPA to first conclude its evaluation of whether the increased use of petroleum coke triggered additional air pollution control requirements under the Prevention of Significant Deterioration (“PSD”) regulations. Statement of Basis, page 4. Instead, the District should have waited until the EPA concluded its PSD evaluation before allowing the Facility to dramatically increase its burning capacity and switch fuel types. The District’s action should have been delayed because the Facility must obtain a permit for all emission increases and facility changes *before* they occur, not after. 40 C.F.R. § 52.21(a)(2)(iii). Therefore, the District must revise the Draft Permit to reduce the Facility’s fuel burning capacity to its original capacity of 8 tons per hour.

Additionally, the Draft Permit must not allow the Facility increase its petroleum coke burning capacity because it could result in the Facility producing even more mercury emissions. It is not clear whether petroleum coke actually contains less mercury than coal. According to the EPA, burning coal emits between 1.82 and 34.71 lbs/TBtu of mercury, depending on the type of coal burned by a facility, while burning petroleum coke emits 23lbs/TBtu of mercury. EPA, IPM Base Case v.4.10, 11-5 (2010). Also, according to the EPA’s Toxic Release Inventory database, the Facility’s mercury emissions jumped from 236 pounds in 2007 to 585 pounds in 2008, after it began to using petroleum coke as its sole fuel source. It is critical that the District obtains more information on the emissions associated with burning petroleum coke before it allows the Facility to increase its fuel burning capacity. Without this information, the Facility may not be able to meet the new NESHAP emission standards by the statutory deadline.

**8. The Draft Permit Must Include Punitive Measures for Noncompliance with the New Emission Standards.**

The new emission standards for the Portland cement manufacturing industry are far more stringent than the previous standards, presenting the Facility with the difficult task of dramatically reducing its mercury, particulate matter, total hydrocarbons, and hydrochloric acid emissions over the next two and a half years. To accomplish this goal, the Facility will have to

make costly and complex changes to its manufacturing processes and daily operations. Since these fundamental changes must occur within a relatively short timeframe, the District should not assume that it is feasible for the Facility to implement all of these necessary changes by the statutory deadline. Therefore, the District must incorporate steep civil penalties, or a procedure for permit rescission, into the Draft Permit to provide an incentive for the Facility to ensure that it complies with the new emission standards by the September 9, 2013 compliance date and that it continues to be in compliance as long as it operates under its Title V Permit. It is essential that the District does not simply trust the Facility to make drastic modifications on its own accord and timeframe – the District must provide oversight and guidance to the Facility throughout this crucial transformation process.

Thank you for considering Baykeeper's comments. If you have any questions, please feel free to contact me at (415) 856-0444, extension 109.

Sincerely,

A handwritten signature in black ink, appearing to read "Abigail D. Blodgett", with a long horizontal flourish extending to the right.

Abigail D. Blodgett  
Legal Fellow  
San Francisco Baykeeper