STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

IN THE MATTER OF:	*
	*
PPG Industries, Inc.,	*
AI No. 1255	*
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PROCEEDINGS UNDER THE	*
LOUISIANA ENVIRONMENTAL	*
QUALITY ACT	*
R.S. 30:2001 ET SEQ.	*
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Petition Requesting Reopening of Title V Air Permit With Respect To Mercury Emissions From the PPG Chlor-Alkali Plant In Lake Charles, Louisiana

Petitioners Louisiana Environmental Action Network, Atchafalaya Basinkeeper Organization, Gulf Restoration Network, Louisiana Audubon Council, and Dean A. Wilson petition as follows:

INTRODUCTION

1. This petition concerns recently promulgated EPA regulations designed to protect the public from the damaging effects of mercury emissions, specifically mercury emissions from the mercury cell chlor-alkali sector. This petition focuses on the application of these new regulations to the PPG mercury cell chlor-alkali plant in Lake Charles, Louisiana.

2. This cell chlor-alkali plant operates under a Title V permit – which authorizes the release of mercury from the facility - issued by the Louisiana Department of Environmental Quality ("LDEQ") on April 15, 2003. Permit #2798-vo.

3. Because the EPA regulations introduce new standards related to mercury emissions, the Clean Air Act mandates that the LDEQ revise the PPG permit to ensure compliance with the new standards. Because this revision must occur within 18 months of the promulgation of the new standard, the LDEQ must revise the PPG permit by **June 19, 2005**.

4. In re-opening PPG's permit, LDEQ has a duty—and an opportunity—to protect the public welfare by ensuring that the permit complies with federal and state law and that the permit process follows the specific review criteria established by the Louisiana Supreme Court in Save Ourselves, Inc. v. Louisiana Environmental Control Commission ("Save Ourselves").[1] That review should include the option of requiring PPG to replace the facility's antiquated equipment with modern equipment which supports mercury free production process and better protects Louisiana's residents and economic and environmental resources.

LEGAL BACKGROUND

5. The term "Title V Air Permit" refers to permits issued under Title V of the CAA, typically by state permitting authorities like LDEQ. The permits are also sometimes called "Part 70 Permits," because the EPA rules governing the minimum requirements that state permitting authorities must include in these permits are located at Title 40, Part 70 of the Code of Federal Regulations.

[1] 452 So. 2d 1152 (La. 1984).

6. Federal law requires that the permitting authority - in this instance, the LDEQ – revise all Title V permits "to incorporate applicable standards and regulations promulgated under this chapter after the issuance of such permit." 42 U.S.C § 7661a(b)(9). This revision mandate applies to all permits with three or more years remaining before expiration at the time a new applicable standard or regulation is promulgated. The law instructs that such revisions "shall occur as expeditiously as practicable and consistent" with procedures described in 42 U.S.C. § 7661a(b)(6), "but not later than 18 months after the promulgation of such standards and regulations." Id. Revisions are not required "if the effective date of the standards or regulations is a date after the expiration of the permit term." Id.

7. The LDEQ's own regulations mandate that, "[a]ny permit issued under this Chapter may be reopened and revised by the permitting authority prior to the expiration of the permit if sufficient cause exists to warrant the reopening." LAC 33:III.529(A). "Sufficient cause" to warrant the reopening is present upon a showing that "the permit must be revised to assure compliance with any federally applicable requirement or any applicable provision of LAC 33:III, Air Quality Regulations." LAC 33:III.529(A)(1)(a). Like the federal standard, the LDEQ regulations instruct, "the reopening shall be completed and final action taken on the permit not later than 18 months after promulgation of the federally applicable requirement." LAC 33:III.529(B)(1)(b).

8. On December 19, 2003, the EPA promulgated a new set of regulations, (codified at 40 C.F.R. §§ 63.8180 – 63.8266) designed to reduce the release of mercury from chlor-alkali plants nationwide.

9. The Louisiana Department of Environmental Quality ("LDEQ") approved PPG's current Title V permit on April 15, 2003, authorizing the release of mercury from its Lake Charles facility. Permit #2798-vo. This permit is not set to expire until April 15, 2008. Id. Because this permit had three or more years remaining prior to its expiration at the time the EPA promulgated the new regulations, Louisiana law and the Clean Air Act ("CAA") mandate that LDEQ reopen and revise the PPG permit to ensure that its terms satisfy these new EPA requirements. LAC, 33:III.529; 42 U.S.C. § 7661a(b)(9).

10. Because this revision must occur within 18 months of the promulgation of the new standard, the LDEQ must revise the PPG petition by **June 19, 2005**. More than 16 months have passed since the EPA regulations took effect (December 19, 2003). Now is a proper time for LDEQ to reopen the PPG permit to bring its terms into compliance with the new EPA regulations and into observance of the public welfare provisions established by the Louisiana Supreme Court in Save Ourselves.

11. When issuing or revising a permit, Save Ourselves requires that the LDEQ, as a public trustee, analyze the environmental impacts of any permitees' action and minimize the negative repercussions of those actions by balancing the impacts against economic, social, and other factors. Therefore, as a part of this analysis, the LDEQ must determine whether an alternative chlorine-production process exists that is less harmful to Louisiana's health, economy, and recreation, which PPG can utilize in producing its chlorine products.

12. Such alternatives *do* exist. Modern methods of chlorine production no longer rely on mercury as a facilitator in the production of chlorine. Mercury-free production processes are available and present economically viable alternatives to the mercury-cell

technology currently in use at the PPG plant. The LDEQ should consider these mercury-free production alternatives and require the PPG facility to modernize its plant technology to employ such methods.

MERCURY AND MERCURY COMPOUNDS

13. Mercury is a toxic metal that PPG uses as an electrode in the production of chlorine. Mercury is highly volatile – able to readily evaporate at normal temperatures and pressures – and is released into the air during this production process. What goes up must come down; thus, some mercury released into the air is deposited onto local soils and waters. Because mercury can be converted into a potent neurotoxin, capable of inflicting devastating damage to the brain and nervous system to persons exposed to it, this deposition creates a substantial risk of harm to human health and the environment in Louisiana.

14. The EPA classifies mercury as a hazardous air pollutant. Organic compounds of mercury such as methylmercury are considered the most toxic forms of the element. When deposited onto surface waters, mercury settles to the bottom of streams and lakes and accumulates in the sediments. Natural bacterial processes can transform some of this mercury into the especially potent form of methylmercury, which in turn, accumulates in aquatic food chains.[2] Exposure to these compounds can result in devastating neurological damage, particularly to small children and fetuses, and can lead to death.[3] Ingestion of seafood is the primary exposure route of methylmercury.[4]

[2] 68 FR 70904 (December 19, 2003).
[3] EPA, Human Health, available at http://www.epa.gov/mercury/health.htm.
[4] Id.

15. This harm is particularly damaging to Louisiana because of this state's rich marine environment ("Louisiana has the longest coastline (15,000 miles) of any state and 41 percent of the nation's wetlands"[5]) and the state's reliance on the seafood industry. "Louisiana's commercial fishing industry produces 25 percent of all the seafood in America. The state holds the record for the greatest annual catch ever recorded - 1.9 billion pounds in a single year."[6] Louisiana waters yield a higher catch of shrimp, produce a greater amount of oysters, and support the nation's "largest and most diversified freshwater fishery production industry."[7]

16. Mercury contamination is especially dangerous to fetuses and young children. The EPA reports that "even low levels of mercury exposure such as result from mother's consumption methylmercury in dietary sources can adversely affect the brain and nervous system. Impacts on memory, attention, language and other skills have been found in children exposed to moderate levels in the womb."[8] Analysis reveals that placenta and umbilical cord tissues host a higher concentration of mercury than the blood of the mother, indicating that mercury accumulates in the placenta and the cord.[9]

17. In response to this growing body of evidence, the Food and Drug Administration and the EPA joined to release a nationwide fish advisory to "women who might become pregnant; women who are pregnant; nursing mothers; and young children."[10] The State of Louisiana also carries advisories warning against consuming fish products contaminated with mercury. Currently, the LDEQ, in conjunction with the

[5] The Louisiana Department of Culture, Recreation & Tourism: www.state.la.us/about_industry.htm.
[6] Id.
[7] Id.
[8] EPA Human Health, available at http://www.epa.gov/mercury/health.htm.
[9] See http://healthandenergy.com/fetal_mercury.htm for a general summary.
[10] See http://www.fda.gov/oc/opacom/hottopics/mercury/backgrounder.html.

Louisiana Department of Health and Hospitals, lists thirty-seven different fish consumption advisories related to Mercury Contamination in Louisiana waters.[11] These advisories limit the amount of, or altogether prohibit, consumption of fish from particular areas within the state. Because of Louisiana's unique reliance on the seafood industry, the State should be particularly sensitive to these advisories – not only for the devastating health impacts that they warn of, but also for the significant threats that such contaminations pose to the State's economy.

18. Mercury emissions impair the significant recreational value of Louisiana's natural resources by contaminating the state's waters and the flesh of its harvestable sea-life. Mercury is *not* a requisite component in chlorine production. Alternative chlorine production methods offer an economical and mercury-free alternative. While early technologies used in the chlor-alkali process included the use of mercury cells, responsible companies have adopted alternatives to mercury cell technology because of pollution concerns. In fact, only nine plants within the United States continue to rely on the mercury cell process to produce chlorine.[12] PPG employs an outdated and unnecessarily harmful technology in its chlorine production facility.

THE PETITIONERS

19. Petitioner Gulf Restoration Network ("GRN"), is a non-profit corporation organized under the laws of the State of Louisiana. The GRN, a regional coalition of almost fifty environmental and social justice groups, is committed to the protection and restoration of the resources of the Gulf of Mexico region. The GRN recognizes that degradation of water quality in water-bodies that ultimately feed into the Gulf poses a

[11] See http://www.deq.state.la.us/surveillance/mercury/fishadvi.htm.
[12] *See* http://www.cheresources.com/chloralk.shtml.

threat to the health of the area's citizenry and to the environmental resources on which they depend. Staff of the GRN provide technical assistance and support to communities in the states bordering the Gulf in opposing environmental threats to local water-bodies that jeopardize their communities. The GRN joins in this petition on behalf of itself and its members.

20. Petitioner Louisiana Environmental Action Network ("LEAN"), is a non-profit corporation organized and operating under the laws of the State of Louisiana. LEAN serves as an umbrella organization for environmental and citizen groups. LEAN was organized for the purpose of preserving and protecting the state's land, air, water, and other natural resources, and protecting its members and other residents of the state from threats of pollution. LEAN has a demonstrated interest in protecting the quality of Louisiana's surface waters. LEAN has members statewide, including members who live, work, or recreate in the areas affected by mercury releases from the PPG chlor-alkali operation. LEAN and its members will continue to suffer direct and irreparable harm to their interests if PPG continues to operate under a permit that fails to comply with current EPA standards and which has not undergone analysis under the "Save Ourselves" standards. LEAN joins in this petition on behalf of itself and its members.

21. Petitioner Louisiana Audubon Council is a non-profit 501(c)(4) organization located in Baton Rouge, Louisiana. Organized in 1989, the Council has five primary purposes: (1) protect and restore habitats for birds and wildlife; (2) further the conservation of land and water; (3) protect life from pollution, radiation and toxic substances; (4) seek solutions for global problems; (5) promote rational strategies for energy development and use, stressing conservation and renewable energy sources. The

Council aims to protect bottomland hardwoods, wetlands habitat, and endangered species. The Council has taken a leading role in alerting the public to the existence of mercury-contaminated fish which, when consumed, can adversely affect human health and wildlife. The Council and its members will continue to suffer direct and irreparable harm to their interests if PPG continues to operate under a permit that fails to comply with current EPA standards and which has not undergone appropriate analysis under the "Save Ourselves" standards. The Council joins in this petition on behalf of itself and its members.

22. Petitioner Atchafalaya Basinkeeper Organization is a non-profit organization dedicated to looking after the survival of the Atchafalaya Basin. The Basinkeeper Organization and its members will continue to suffer direct and irreparable harm to their interest if LDEQ continues to allow PPG to emit mercury under a permit which fails to comply with the current EPA standards and which has not undergone an analysis under the "Save Ourselves" standards. The Basinkeeper Organization joins in this petition on behalf of itself and its members.

23. Petitioner Dean A. Wilson fishes and consumes fish from within the Basin and throughout Louisiana. Mr. Wilson will continue to suffer direct and irreparable harm to his recreational enjoyment of these waters and to his interest in preserving the environmental integrity of the Basin if PPG continues to emit mercury under its current permit which fails to comply with the current EPA standards and which has not undergone an analysis under the "Save Ourselves" standards. Petitioner Dean A. Wilson joins in this petition on his own behalf.

THE NEW REGULATIONS AND THE CURRENT PERMIT'S INADEQUACIES

24. The new mercury emission standards recognize two major mercury emissions points in mercury cell chlor-alkali plants: "by-product hydrogen streams" and "end box ventilation systems." The new mercury emission standards set new limits on the amount of mercury that each of these two sources may emit.

25. These limitations apply in proportion to the total amount of chlorine produced at the plant during any 52-week period. 40 C.F.R. § 63.8190. Under the new standards, facilities that employ both "end box ventilation systems" and "by-product hydrogen streams" may emit 0.076 grams of mercury per megagram of chlorine produced. 40 C.F.R. § 63.8190(a)(2)(i). Facilities that employ only "by-product hydrogen streams" without use of "endbox ventilation systems" may emit 0.033 grams of mercury per megagram of chlorine produced. 40 C.F.R. § 63.8190(a)(2)(ii). The Lake Charles PPG plant produces at least 3,500 tons per day of chlorine.[13] This converts to approximately 3,175 megagrams of chlorine per day.[14]

26. Therefore, the new rule prohibits the PPG plant from emitting more than 241 grams of mercury per day if the facility employs both hydrogen stream and end box ventilation systems,[15] and nearly 105 grams if the plant does not use end box ventilation.[16] The old standard effectively allowed 1000 grams of mercury emissions from these sources – at least 759 grams in excess of the new EPA limitations.[17]

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[13] See www.laia.com/ppg.asp.
[14] Calculation: 1 ton = 0.90718474 megagrams; 3,500 tons multipled by 0.90718474 = 3175.14659.
[15] Calculation: 0.076 grams mercury allowed per megagram of chlorine. 0.076 x 3175 = 241.3 grams of mercury allowed.
[16] Calculation: 0.033 grams of mercury allowed per megagram of chlorine produced. 0.033 x 3175 = 104.775 grams of mercury allowed.
[17] Calculation: 1,000 – 241 = 759.

Consequently, PPG's permit allows them to emit at least four times more mercury from these sources than the new EPA rule allows.[18]

27. In addition to the standards for reduced mercury emissions from particular types of equipment within the facility, the new regulations also impose new requirements related to monitoring and work practice standards. 40 C.F.R. § 63.8240-8248. Specifically, the new regulations mandate either continuous monitoring or — if the facility follows specific work practice standards — periodic monitoring of mercury emissions within facilities. The current permit does not address the new monitoring and work practice requirements.

28. The new work practice standards involve specific methods for cleaning, maintenance, and use regulations, which should minimize mercury spills. 40 C.F.R. § 63.8222. The current PPG permit does not address these new practice standards.

29. Also absent from PPG's permit are semi-annual compliance reports and other records, such as all the performance tests, the monitoring data, the average release data, etc. 40 C.F.R. §§ 63.8252-8258.

30. PPG's current permit does not sufficiently address the requirements established in the new EPA guidelines. Because PPG has more than three years remaining on the duration of this non-complaint permit, federal law requires that the permit undergo revision to reflect compliance with the new EPA standards.

31. This mandate to review and revise permits in light of newly applicable standards provides an opportunity for LDEQ to apply the "Save Ourselves" analysis to this permit—balancing the available alternatives to PPG's mercury production against the

[18] Calculation: 1000 / 241 = 4.15.

negative repercussions of mercury emissions and to protect the health of the citizens of Louisiana.

REQUEST FOR AGENCY ACTION

WHEREFORE, Petitioner respectfully requests the following LDEQ action by or before **June 19, 2005**:

A. An agency decision stating the current permit, as it pertains to mercury emissions standards and procedures, is inadequate in light of the new EPA regulations;

B. A new, full permit process in regard to any mercury provision in the current PPG permit, including public notice and comment, to insure compliance with the new EPA regulations in time for their compliance date, and an evaluation of alternatives under the "Save Ourselves" analysis.

Respectfully submitted this 13th day of April, 2005,

TULANE ENVIRONMENTAL LAW CLINIC

Kathryn Miller, Student Attorney
On Behalf of Dean A. Wilson

Adam Babich, (La. Bar No. 27177)
Supervising Attorney for Ms. Miller's Representation of Dean A. Wilson, and Counsel for Petitioners Louisiana Environmental Action Network, Atchafalaya Basinkeeper Organization, Gulf Restoration Network, Louisiana Audubon Council, and Dean A. Wilson.
6329 Freret Street, Room 130
New Orleans, LA 70118
Phone: (504) 862-8800
Fax: (504) 862-8721

SUPERVISING ATTORNEY'S INTRODUCTION OF STUDENT ATTORNEY AND NOTICE OF APPROVAL OF STUDENT APPEARANCE

Undersigned counsel respectfully introduces student attorney Kathryn Miller. As Ms. Miller's supervising attorney, I approve of her appearance in this matter. With this document, we also submit written consent of the applicable client(s) to an appearance by student attorneys in this matter.

Signed:

TULANE ENVIRONMENTAL LAW CLINIC

4/13/05

Adam Babich, (La. Bar No. 27177)
Supervising Attorney representing Gulf Restoration Network, Louisiana Environmental Action Network, Louisiana Audubon Council, Atchafalaya Basinkeeper Organization, and Dean A. Wilson.
6329 Freret Street, Room 130
New Orleans, LA 70118
Phone: (504) 862-8800
Fax: (504) 862-8721

CLIENT'S WRITTEN CONSENT FOR STUDENT ATTORNEY APPEARANCE

I grant my consent for student attorneys from the Tulane Environmental Law Clinic to appear on my behalf in any matter in which the Tulane Environmental Law Clinic represents me, whether in Court or before an administrative tribunal.

Date: 11-30-04

[signed:] Dean A. Wilson
Dean A. Wilson