

EAST BATON ROUGE PARISH C-694029  
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Deputy Clerk of Court

19<sup>TH</sup> JUDICIAL DISTRICT COURT  
PARISH OF EAST BATON ROUGE  
STATE OF LOUISIANA

RISE ST. JAMES, LOUISIANA	*	
BUCKET BRIGADE, SIERRA CLUB,	*	
CENTER FOR BIOLOGICAL	*	NUMBER _____
DIVERSITY, HEALTHY GULF,	*	
EARTHWORKS, and NO WASTE	*	DIVISION _____
LOUISIANA,	*	
	*	JUDGE _____
Petitioners,	*	
	*	
v.	*	
	*	
LOUISIANA DEPARTMENT OF	*	
ENVIRONMENTAL QUALITY,	*	
	*	
Defendant.	*	
	*	

**PETITION FOR JUDICIAL REVIEW**

1. RISE St. James, Louisiana Bucket Brigade, Sierra Club, Center for Biological Diversity, Healthy Gulf, Earthworks, and No Waste Louisiana (collectively, "Petitioners") appeal Louisiana Department of Environmental Quality's final decision made on January 6, 2020 granting Prevention of Significant Deterioration Permit PSD-LA-812 and Title V/Part 70 Air Operating Permits 3141-V0, 3142-V0, 3143-V0, 3144-V0, 3145-V0, 3146-V0, 3147-V0, 3148-V0, 3149-V0, 3150-V0, 3151-V0, 3152-V0, 3153-V0, 3154-V0 (collectively, "Permits") to PCL LA LLC ("Formosa Plastics") to construct and operate a new chemical complex comprised of 14 separate plants ("Chemical Complex") in St. James Parish, District 5.

2. As detailed below, Petitioners ask the Court to vacate LDEQ's decision to issue the Permits because the decision violates the Louisiana Environmental Quality Act, Louisiana air regulations, and article IX, section 1 of the Louisiana Constitution, as well as the other legal provisions specified in this Petition.

**SUMMARY**

3. LDEQ's decision allows a Taiwan-based petrochemical giant to build a massive new chemical complex in a predominantly African American area of St. James Parish that lies in the center of "Cancer Alley," a region that stretches along the Mississippi River from Baton

Rouge to New Orleans. Cancer Alley got its name as the area with the highest cancer risk in the nation due to industrial emissions and other industrial wastes. Decades later, the U.S. Environmental Protection Agency data continues to confirm that the Cancer Alley name is warranted.

4. LDEQ granted Formosa Plastics permits to construct 14 separate major facilities, including 10 chemical plants. The planned Chemical Complex would manufacture ethylene and propylene, primarily to produce plastics. The other four facilities would support these operations. Formosa Plastics would build this complex a mile from an elementary school in Welcome, and less than one mile from the community of Union in Convent. Its massive air pollution emissions would vastly add to the significant environmental and health burden that African American communities in and near St. James must suffer—including from two new recently permitted methanol petrochemical plants, and Nucor Steel's major expansion project.

5. Formosa Plastics' air emissions will also spread to communities across St. James Parish, contributing to the region's air pollution problems. The Permits would allow Formosa Plastics to release fine particulates and nitrogen dioxide in quantities that exacerbate ongoing violations of EPA's mandatory national standards in St. James Parish. And they would allow Formosa Plastics to be one of the largest industrial sources in the state for some of the most dangerous carcinogenic air pollutants, such as benzene and formaldehyde, and one of the largest in the nation for others, such as ethylene oxide.

6. On the day of the public hearing on the Permits, area residents, including many members of the Petitioner organizations, filled the hearing room and asked LDEQ to reject the Permits. Area residents told LDEQ that St. James is already full of industrial facilities and harmful pollutants. They described to LDEQ how their health is suffering from toxic exposures and that they cannot take any more. LDEQ received over 15,000 written comments urging the agency to deny the Permits. But LDEQ made only minor modifications to the Permits and essentially granted them as proposed.

7. LDEQ's decision violates the Clean Air Act, and state regulations that implement the Act. LDEQ granted the permit even though Formosa Plastics failed to demonstrate that its emissions would not "cause or contribute to" violations of certain national standards. These

standards, promulgated by EPA, are at the heart of the Clean Air Act. They protect people's health by limiting the concentration in the air of select pollutants people breathe. In fact, LDEQ ignored Formosa Plastics' modeling that showed the project's emissions exceeded some of these standards. LDEQ has been aware of industry modeling showing violations of some of these standards for much of the last decade, but the agency continues to let industry build and pollute in St. James Parish.

8. As detailed below, the agency also failed to meet other Clean Air Act requirements related to air standards, emissions monitoring and reporting, and other requirements.

9. This project will also result in 13.6 million tons of greenhouse gas emissions, as much as three and a half coal fired power plants emit annually. Particularly given Louisiana's vulnerability to the consequences of climate change from flooding and coastal erosion to extreme weather, failure to consider Formosa Plastics' high contribution to Louisiana's greenhouse gas emissions reflects LDEQ's failure to discharge its duty as public trustee.

10. LDEQ violated its constitutionally mandated public trustee duty by failing to determine that it has avoided the potential and real adverse effects of Formosa Plastic's planned Chemical Complex to the maximum extent possible, and more broadly, by failing to provide the "active and affirmative protection" to the public that the law requires. This is particularly apparent in the way LDEQ permitted such large toxic releases. For instance, in estimating the project's dangerous cancer-causing ethylene oxide emissions, LDEQ allowed Formosa Plastics to rely on an assumed 99.9 percent emission reduction without verifying that a control device with this level of effectiveness exists. LDEQ failed to require Formosa Plastics to provide this verification even though the complex would be one of the very largest sources of ethylene oxide emissions in the nation. Then LDEQ failed to require adequate monitoring to assure compliance with the limits that it set for ethylene oxide. The ethylene oxide emissions are just one of many examples of the agency taking Formosa Plastics' emission estimates at face value, and failing to consider this project's contribution to the cumulative risk, stacking risk upon risk on people who live in the area.

11. In violation of the law, LDEQ failed to discharge its responsibility to protect the

public health, environment, and public safety when it granted Formosa Plastics' Permits. Unless the Court reverses that decision, the public will bear the serious risks of harm from LDEQ's decision. The Court must vacate the Permits, enjoin further action taken pursuant to them, and remand this matter to LDEQ to address the violations detailed in this Petition.

#### JURISDICTION AND VENUE

12. Jurisdiction and venue are proper in this Court pursuant to La. R.S. § 30:2050.21(A).

13. The postmarked date for LDEQ's notice of its decision to issue the Permits is January 15, 2020. This appeal is timely pursuant to La. R.S. §§ 30:2050.21(A), 2050.23(D).

#### PARTIES

14. Petitioners are persons who are aggrieved by LDEQ's final decision to issue the Permits in this matter and who may appeal the final permitting decision pursuant to La. R.S. §§ 30:2050.21, 30:2004(8) & (17). The Petitioners filed timely extensive written comments into the record in this case and participated in the public hearing, outlining numerous objections to LDEQ's proposed decision to issue the Permits.

15. RISE St. James is a faith-based environmental and social justice organization fighting to protect the air, land, water, and the bodies of the people in St. James Parish from harmful petrochemical pollution. RISE St. James' members advocate for racial, social, and environmental justice. The majority of RISE St. James' members reside in St. James Parish District 5 and District 4. These members are extremely concerned about the impacts of harmful air pollution in their communities and as a result have been very active in opposing Formosa Plastics' Chemical Complex and other proposed petrochemical facilities in St. James Parish, particularly in District 5 and District 4. RISE St. James' members are concerned that Formosa Plastics' emissions would impair their health and their environment.

16. Louisiana Bucket Brigade is an environmental health and justice organization with members who live in the shadow of Louisiana's oil refineries and chemical plants, including in St. James Parish District 5. Louisiana Bucket Brigade's mission is to bring about a Louisiana that is healthy, prosperous, and pollution-free. Louisiana Bucket Brigade uses grassroots organizing and action to hold the petrochemical industry and government accountable for the true costs of

pollution from petrochemical operations and hasten the transition from fossil fuels to cleaner forms of energy. Louisiana Bucket Brigade has members who live in St. James Parish District 5 and District 4. These members are concerned that Formosa Plastics' emissions would impair their health and their environment.

17. Healthy Gulf was founded in 1994 and has more than 25,000 members and supporters in all five Gulf States, many of whom live in Louisiana, who are committed to uniting and empowering people to protect and restore the natural resources of the Gulf Region. Healthy Gulf has members who live in St. James Parish District 5 who are concerned about the impacts that Formosa Plastics' emissions will have on their health and their environment.

18. Sierra Club is one of the oldest and largest national nonprofit environmental organizations in the country, with approximately 3.5 million members and supporters dedicated to exploring, enjoying, and protecting the wild places and resources of the earth; practicing and promoting the responsible use of the Earth's ecosystems and resources; educating and enlisting humanity to protect and restore the quality of the natural and human environment; and using all lawful means to carry out these objectives. Sierra Club's Delta Chapter is active in Louisiana. One of Sierra Club's priorities is promoting and improving air quality. In particular, Sierra Club seeks to reduce the unnecessary and often harmful use of fossil fuels in facilities like Formosa Plastics' planned Chemical Complex. Sierra Club's members and supporters who live in the area along the Mississippi River from Baton Rouge to New Orleans are very concerned Formosa Plastics' planned Chemical Complex and worry that their health and the environment will be negatively impacted by the air emissions from the complex.

19. The Center for Biological Diversity is a non-profit organization with approximately 67,000 active members nationwide, including members who live in Louisiana. The Center works through science, law, and policy to secure a future for all species, great or small, hovering on the brink of extinction. In furtherance of these goals, the Center seeks to reduce U.S. greenhouse gas emissions and other air pollution to protect biological diversity, the environment, and human health and welfare. In pursuit of its mission, the Center has been working to stem the environmental and public health harms from plastics production in the Gulf region and nationwide.

20. Earthworks is a nonprofit organization dedicated to protecting communities and the environment from the impacts of oil, gas, mining, and petrochemical development while seeking sustainable solutions. For more than 25 years, Earthworks has worked to advance policy reforms, safeguard land and public health, and improve corporate practices. Its team works with local communities, partner organizations, public agencies, and elected officials to advance these goals nationwide, including in Louisiana. Earthworks has 212 supporters living in Louisiana, including in St. James Parish.

21. No Waste Louisiana is an alliance of local chapters dedicated to supporting waste prevention policies and community practices of reduction, reuse, and refill, moving Louisiana away from landfill and protecting our neighborhoods, bayous, and parks from pollution.

22. LDEQ is the primary agency of the State of Louisiana concerned with environmental protection and regulation. La. R.S. 30:2011(A)(1). It has the authority to issue air permits and has the affirmative obligation to consider the environmental impacts of its decisions. It has the power to sue and be sued and is the agency that made the final permit decisions in this matter.

### LEGAL FRAMEWORK

#### *National Ambient Air Quality Standards & Prevention of Significant Deterioration*

23. The Clean Air Act establishes a rigorous program for regulating new and existing sources of air pollution. The National Ambient Air Quality Standards ("NAAQS") that the U.S. Environmental Protection Agency establish for certain pollutants are at the heart of the Clean Air Act. *See* 42 U.S.C. § 7409. The NAAQS protect people's health by limiting the concentration of each such pollutant allowable in the ambient air people breathe. *Id.* § 7409(b). To date, the EPA has promulgated NAAQS for six types of air pollutants. *See* 40 C.F.R. pt. 50.

24. After setting a NAAQS, EPA designates areas as "attainment" or "nonattainment" based on whether they meet that NAAQS. *Id.* § 7407(d). Alternatively, EPA may designate an area as "unclassifiable" if the area "permit[s] no determination given existing data." *Catawba Cnty., N.C. v. EPA*, 571 F.3d 20, 26 (D.C. Cir. 2009) (citing 42 U.S.C. § 7407(d)(1)(A)(i)-(iii)). The EPA treats an "unclassifiable" area as if it were in attainment. *See* 42 U.S.C. § 7471. EPA

has classified St. James Parish as “unclassifiable/attainment” for several standards, including all standards for particulate matter with a nominal diameter of less than or equal to 2.5 micrometers (“PM<sub>2.5</sub>”) and the 1-hour standard for nitrogen dioxide (“NO<sub>2</sub>”). 40 C.F.R. § 81.319.

25. In areas designated attainment, the Clean Air Act requires the *prevention of significant deterioration* of air quality to guard against the development of unhealthy air. See 42 U.S.C. §§ 7470-7479 (the “PSD provisions”). The Clean Air Act defines the “significant deterioration” that must be prevented in two parts. First, new construction or modification of large stationary sources of air pollution (like Formosa Plastics’ planned Chemical Complex) must not cause or contribute to a violation of any NAAQS. *Ala. Power Co. v. Costle*, 636 F.2d 323, 362 (D.C. Cir. 1979); see 42 U.S.C. § 7475(a)(3) (establishing preconstruction review requirements). Second, to ensure air quality does not degrade significantly, the Act required EPA to set maximum allowable increases in air pollution levels (“increments”), 42 U.S.C. § 7476; see also *id.* § 7473 (establishing by statute certain increments), and required that new construction or modification of such sources of air pollution also not cause or contribute to a violation of any increment. *Ala. Power*, 636 F.2d at 362; 42 U.S.C. § 7475(a)(3).

26. The “principal mechanism” for monitoring compliance with the NAAQS and “the consumption of allowable increments” is the preconstruction review and permitting process in 42 U.S.C. § 7475. *Ala. Power*, 636 F.2d at 362. No new or modified “major emitting facility”<sup>1</sup> may be built in an attainment area unless it receives a preconstruction permit (i.e., PSD permit), and any applicant for such a permit must demonstrate that new emissions from the proposed project “will not cause, or contribute to,” an exceedance of any NAAQS or allowable increment consumption. 42 U.S.C. § 7475(a)(3).

27. Every state must develop a state implementation plan (“SIP”) for EPA approval to ensure that the NAAQS are achieved and maintained. 42 U.S.C. § 7410(a)(1)-(2), (1). State implementation plans must “include enforceable emission limitations and other control measures, means, or techniques... as well as schedules and timetables for compliance” to meet

<sup>1</sup> Major emitting facilities are those with the potential to emit at least 100 tons per year of any air pollutant, in certain source categories, or 250 tons per year in any other source category. *Id.* § 7479(1).

the national air quality standards. *St. Bernard Citizens for Env'tl Quality, Inc. v. Chalmette Refining, L.L.C.*, 399 F. Supp. 2d 726, 730 (E.D. La. 2005) (internal citations and quotations omitted). All state implementation plans must also provide mechanisms "to prevent significant deterioration of air quality in each region." 42 U.S.C. § 7471. Upon receiving EPA approval, "the state implementation plan becomes federally enforceable." *St. Bernard Citizens*, 399 F. F. Supp. 2d at 730. Louisiana's EPA-approved SIP provisions that incorporate the Clean Air Act's PSD requirements are in Louisiana Administrative Code at 33:III.509. *See* 40 C.F.R. § 52.970(c) (identifying EPA approved regulations in the Louisiana SIP); *see also* 40 C.F.R. § 52.999(c) and 52.986. The Louisiana Environmental Quality Act defines "implementation plan" as "any pollution control or other environmental regulatory plan prepared by a state agency in compliance with the terms of the Clean Air Act (42 U.S.C.A. 7401 et seq.)." La. R.S. § 30:2004.

28. LDEQ has the authority delegated by EPA "for the program administration and issuance of required permits of the New Source Review (NSR) that is directed at construction in Prevention of Significant Deterioration (PSD) areas . . . for stationary sources located in the state, as well as any other such programs existing under the provisions of the Clean Air Act of 1972." La. R.S. § 30:2011.

29. Major stationary sources as defined under LAC 33:III.509.B must meet Louisiana's PSD requirements under LAC 33:III.509.J-R. LAC 33:III.509.A.2. "No new major stationary source or major modification to which the requirements of Subsection J-Paragraph R.5 of this Section apply shall begin actual construction without a permit that states that the major stationary source or major modification will meet those requirements." LAC 33:III.509.A.3. Such requirements include, among other things, the following:

- a. Application of "best available control technology ["BACT"] for each regulated NSR pollutant [i.e., PSD pollutant] that [the source] would have the potential to emit in significant amounts." LAC 33:III.509.J.2.
- b. Demonstration by the "owner or operator of the proposed source . . . that allowable emission increases from the proposed source [], in conjunction with all other applicable emissions increases or reductions, including secondary emissions, would not cause or contribute to air pollution in



violation of: a. any national ambient air quality standard in any air quality control region; or b. any applicable maximum allowable increase over the baseline concentration in any area." LAC 33:III.509.K.1.

30. "All estimates of ambient concentrations required under this Subsection [i.e., LAC 33:III.509, Prevention of Significant Deterioration] shall be based on applicable air quality models, databases, and other requirements specified in Appendix W of 40 CFR Part 51 (Guideline on Air Quality Models)." LAC 33:III.509.L.1.

31. Appendix W mandates the "screening approach" "[t]o determine if a compliance demonstration for NAAQS and/or PSD increments may be necessary beyond 50 km (i.e., long-range transport assessment)." 40 C.F.R. § Pt. 51, App. W, 4.2.c. The mandated screening approach has two steps. First, the applicant must "determine the significance of the ambient impacts at or about 50 km from [the proposed chemical complex]" "[b]ased on application in the near-field of the appropriate screening and/or preferred model." 40 C.F.R. § Pt. 51, App. W, 4.2.c.i. Step 2 requires further assessment "[i]f a near-field assessment is not available or this initial analysis indicates there may be significant ambient impacts at that distance ...." *Id.* The step 2 assessment in Appendix W specifically mandates that "applicants shall reach agreement on the specific model and modeling parameters on a case-by-case basis in consultation with the appropriate reviewing authority (paragraph 3.0(b)) and EPA Regional Office." 40 C.F.R. § Pt. 51, App. W, 4.2.c.ii (emphasis added).

32. Louisiana's general air regulations define "potential to emit" as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if: a. the limitation is enforceable by the administrator, when the potential to emit is being considered with regard to federally applicable requirements; or b. the limitation is enforceable by the department when the potential to emit is being considered with regard to state applicable requirements." LAC 33:III.502.

33. Similarly, Louisiana's regulations implementing PSD requirements defines

"potential to emit" as "the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable." LAC 33:III.509.B.

*Louisiana Air Operating Permits Program (Clean Air Act Title V Requirements)*

34. The Clean Air Act requires each state to develop and submit to EPA a program for air operating permits intended to meet the requirements of Title V of the Act. 42 U.S.C. § 7661a(d)(1). Louisiana's approved program is codified in 1-AC, tit. 33, pt. III, Ch. 5. See 60 Fed. Reg. 47296 (September 12, 1995) (approving Louisiana's Title V permits program).

35. Louisiana regulations require all major sources, such as Formosa Plastics' Chemical Complex, to obtain a permit that will meet the requirements of Louisiana's Title V operating permits program. LAC 33:III.507.A.1.

36. Louisiana regulations mandate that Title V permits "shall incorporate all federally applicable requirements for each emissions unit at the source." LAC 33:III.507.A.3.

37. The term "federally applicable requirements," as defined under LAC 33:III.502, is very broad and includes, among other things,

- a. any standard or other requirement provided for in the Louisiana State Implementation Plan approved or promulgated by EPA through rulemaking under Title I of the Clean Air Act that implements the relevant requirements of the Clean Air Act, including any revisions to that plan promulgated in 40 CFR Part 52, Subpart T;
- b. any term or condition of any preconstruction permits (e.g., PSD permits) issued pursuant to regulations approved or promulgated through rulemaking under Title I of the Clean Air Act, including Part C (Prevention of Significant Deterioration) or D (Nonattainment);
- c. any standard or other requirement under Section 111 (New Source Performance Standards) of the Clean Air Act, including Section 111(d)

(Existing Source Performance Standards);

- d. any standard or other requirement under Section 112 (Hazardous Air Pollutants) of the Clean Air Act, including any requirement concerning accident prevention under Section 112(r)(7) of the Clean Air Act.

38. Louisiana regulations also mandate that each Title V permit "shall include . . . compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit as required by 40 C.F.R. 70.6(a)(3)." LAC 33:III.507.11 (mirroring the language in 40 C.F.R. 70.6(e)(1).

39. Incorporating mandatory requirements of the Clean Air Act, Louisiana regulations governing Title V permits further require that LDEQ "shall incorporate into each permit sufficient terms and conditions to ensure compliance with all state and federally applicable air quality requirements and standards at the source and such other terms and conditions as determined by the permitting authority to be reasonable and necessary." LAC 33:III.501.C.6; 42 U.S.C. § 7661c(e) ("Each permit issued under [Title V] shall set forth inspection, entry, monitoring, compliance certification, and reporting requirements *to assure compliance with the permit terms and conditions.*") (emphasis added)).

40. BACT is an emissions limitation that must be enforceable in a Title V permit. Louisiana regulations BACT as "an emissions limitation...based on the maximum degree of reduction from each pollutant subject to regulation under this Section that would be emitted from any proposed major stationary source or modification..." LAC 33:III.509.B.

41. In order for BACT to "limit" emissions it must be enforceable. Louisiana regulations require LDEQ to incorporate BACT as enforceable conditions of the Title V permit, through either emission limits or operating parameters. *See id.* That is, where a specific numeric limit is technically or economically infeasible, Louisiana regulations provides that "a design, equipment, work practice, or operational standard or combination thereof may be prescribed instead to satisfy the requirement for best available control technology." *Id.* The provision further stresses that "[s]uch standard shall, to the degree possible, set forth the emission reduction achievable by implementation of such design, equipment, work practice or operation, and provide for compliance by means that achieve equivalent results." *Id.*

42. Permit limits must be both legally and practically enforceable (i.e., enforceable as a practical matter). See *In the Matter of Yuhuang Chemical Inc. Methanol Plant*, Order on Petition No. VI-2015-03 at 14 (August 31, 2016). In order to be enforceable as a practical matter, the permit must, among other things, "clearly specify how emissions will be measured or determined for purposes of demonstrating compliance." *Id.* To accomplish this, "limitations must be supported by monitoring, recordkeeping, and reporting requirements sufficient to enable regulators and citizens to determine whether the limit has been exceeded and, if so, to take appropriate enforcement action." *Id.* (emphasis added).

43. "In any case where [LDEQ] has determined that any proposed new or modified source would prevent the attainment or maintenance of any state or national ambient air quality standard, would violate any applicable portion of the Louisiana State Implementation Plan, or would not result in compliance with all federally applicable requirements and all requirements and standards of LAC 33:III, Air Quality regulations, [LDEQ] shall have the power to prevent construction, modification, or operation of such source and shall deny the permit." LAC 33:III.519 (emphasis added).

#### ***Louisiana Public Trustee Duty***

44. Under Article IX, § 1 of the Louisiana Constitution, LDEQ has a duty as a public trustee to protect the environment "insofar as possible and consistent with the health, safety, and welfare of the people." La. Const. Art. 9, Sec. 1.

45. The Supreme Court interpreted Article IX, § 1 as requiring LDEQ "to determine that adverse environmental impacts have been minimized or avoided as much as possible consistently with the public welfare," and LDEQ must make this determination "before granting approval of proposed action affecting the environment." *Save Ourselves v. La. Envtl. Control Comm'n*, 452 So. 2d 1152, 1157 (1.a. 1984).

When issuing permits, such as the Permits in this matter, LDEQ must meet its mandate as public trustee under Article IX, Section 1 of the Louisiana Constitution. *Save Ourselves*, 452 So. 2d 1152, 1157. LDEQ's decision must satisfy the issues of whether: (1) the potential and real adverse environmental effects of the proposed project have been avoided to the maximum extent possible; (2) a cost-benefit analysis of the environmental impact costs balanced against the social and economic benefits of the project demonstrate that the latter outweighs the former; and (3) there are no alternative projects or alternative sites or mitigating measures which would offer more protection to the environment

than the proposed project without unduly curtailing non-environmental benefits to the extent applicable.

*In re Oil & Gas Expl., Dev., & Prod. Facilities, Permit No. LAG260000*, 2010-1640, p. 4 (La. App. 1 Cir. 6/10/11); 70 So. 3d 101, 104.

46. As a public trustee, the LDEQ is duty-bound to demonstrate that it has properly exercised the discretion vested in it by making basic findings supported by evidence and ultimate findings that flow rationally from the basic findings; and it must articulate a rational connection between the facts found and the order, or in this case, the permit issued. *See Save Ourselves, Inc.*, 452 So. 2d at 1159-60.

47. The reviewing court must reverse LDEQ's permitting decision, "if the decision was reached without individualized consideration and balancing of environmental factors conducted fairly and in good faith." *Id.* at 1159 (internal quotations omitted).

48. The Louisiana Environmental Quality Act incorporates LDEQ's public trustee duty, mandating that "as the primary public trustee of the environment, [LDEQ] shall consider and follow the will and intent of the Constitution of Louisiana and Louisiana statutory law in making any determination relative to the granting or denying of permits." La. R.S. 30:2014.A.4.

49. The Louisiana Environmental Quality Act requires applicants for air permits for sources such as Formosa Plastics' planned Chemical Complex to submit an environmental assessment statement ("EAS") as a part of the permit application. La. R.S. § 30:2018.A. "The environmental assessment statement provided for in this Section shall be used to satisfy the public trustee requirements of Article IX, Section 1 of the Constitution of Louisiana and shall address the following issues regarding the proposed permit activity." La. R.S. § 30:2018.B.

50. Subpart H provides: "Nothing in this Section shall relieve permit applicants or the department from the public trustee requirements set forth in Article IX, Section 1 of the Constitution of Louisiana and by the Supreme Court of Louisiana in *Save Ourselves v. Louisiana Environmental Control Commission*, 452 So.2d 1152 (La. 1984)." La. R.S. § 30:2018.H.

#### **REVIEW STANDARD**

51. The judicial review provisions in the Louisiana Environmental Quality Act provide that the standard of review in the Louisiana Administrative Procedures Act ("APA")

applies to an appeal of a final permit action. La. R.S. § 30:2050.21(F). The APA provides:

The court may reverse or modify the decision if substantial rights of the appellant have been prejudiced because the administrative findings, inferences, conclusions, or decisions are: (1) In violation of constitutional or statutory provisions; (2) In excess of the statutory authority of the agency; (3) Made upon unlawful procedure; (4) Affected by other error of law; (5) Arbitrary or capricious or characterized by abuse of discretion or clearly unwarranted exercise of discretion; or (6) Not supported and sustainable by a preponderance of evidence as determined by the reviewing court.

La. R.S. § 49:964.C.

52. If the Court finds that LDEQ took action in violation of its constitutional public trustee duty, “the permit[s] herein, [are] null and void and must be vacated.” *In re Rubicon, Inc.*, 95-0108, p. 9, (La. App. 1 Cir. 2/14/1996); 670 So. 2d 475, 481.

53. “[I]f [LDEQ’s] decision was reached procedurally, without individualized consideration and balancing of environmental factors conducted fairly and in good faith, it is the courts’ responsibility to reverse.” *Save Ourselves*, 452 So. 2d at 1159.

#### **PROCEDURAL HISTORY**

54. Formosa Plastics initially submitted applications to LDEQ in September 2015 for air permits to build its Chemical Complex on a site several miles downriver of its current site. In October 2018, Formosa Plastics replaced those applications with new application materials requesting a PSD permit and 14 Title V (or Part 70) operating permits for its Chemical Complex at the current site, which is located in St. James Parish District 5. The site is adjacent to the historic African American community of Welcome and directly across the Mississippi River from the African American community of Union. Formosa Plastics supplemented its applications with additional materials that it submitted to LDEQ through March 1, 2019.

55. LDEQ issued a public notice on May 28, 2019 on a proposed PSD permit, 14 proposed Title V permits, and the associated Environmental Assessment Statement (“EAS”) for Formosa Plastics’ proposed Chemical Complex.

56. LDEQ held a public hearing on the proposed permits and EAS on July 9, 2019, where community residents and organizations filled the St. James West Bank Reception Hall to oppose the issuance of the permits.

57. Residents at the public hearing living within two miles of the Formosa Plastics’

chosen site unanimously opposed the project, voicing concerns mostly about health impacts associated with living near industrial plants.

58. LDEQ extended the written comment period until August 12, 2019. During the public comment period, the agency received over 15,000 comments from individuals and organizations opposing the issuance of the permits.

59. Petitioners submitted comprehensive comments to LDEQ on the proposed permits and EAS on August 12, 2019, including comments from engineering experts in permitting under the Clean Air Act, along with supplemental comments August 28, 2019 and November 26, 2019.

60. On January 6, 2020, LDEQ issued a final decision granting the Permits at issue in this proceeding with minimal changes from the proposed permits.

61. Petitioners raised all reasonably ascertainable issues and submitted all reasonably available evidence supporting their position on Formosa Plastics' permit applications in the comments that they submitted to LDEQ prior to the issuance of LDEQ's final decision granting the Permits. See La. R.S. § 30:2014.3.B.

62. Petitioners have good cause within the meaning of La. R.S. § 30:2014.3.C to raise new issues and introduce new evidence in this proceeding, particularly to the extent they were not reasonably ascertainable or reasonably available prior to the issuance of LDEQ's final decision granting the Permits.

### FACTS

#### *The Community*

63. St. James Parish is divided into seven districts. Formosa Plastics' 2400-acre site sits entirely within District 5. It is also right across the Mississippi River from communities in District 4.

64. District 5 is home to several historic African American communities including Welcome, which is adjacent to the Formosa Plastics site.

65. District 4 is also home to African American communities, including Union, which abuts the Mississippi River levee less than a mile from the Chemical Complex.

66. In 2014, St. James Parish adopted its first-ever land use plan, where it designated large portions of District 5 as "Industrial" or "Existing Residential/Future Industrial." This plan

put several historic African American residential communities and churches in areas the Parish now designated as "Industrial" or "Existing Residential/Future Industrial." See Section 86-37 of the St. James Parish Code of Ordinances.

67. In May 2018, St. James Parish amended its land use plan, converting the area immediately adjacent to Formosa Plastics' site from "Existing Residential/Future Industrial" to "Residential Growth," where the historic community of Welcome is located.

68. More than 2,000 people live within 3 miles of the Formosa Plastics site, 75% of whom identify as African American.

69. According to EPA's EJScreen, the communities immediately surrounding Formosa Plastics' site are disproportionately minority. For instance, Welcome has a 93% minority population.

70. According to 2010 Census Tract data, the tract that includes Formosa Plastics' site (Tract 405) shows that 87.1% of the total population identifies as "Black or African American."

71. The population of St. James Parish as a whole is 52% minority, and the state of Louisiana has a minority population of 41%.

72. The data show that the proposed site for the facility is located within an area that has a significantly higher minority population than the parish as a whole or the state, as a whole.

73. The Formosa Plastics site is well under one mile from the residential community of Union, across the Mississippi River in Convent, and approximately one mile upriver from Fifth Ward Elementary School (renamed St. Louis Academy) and the residential community of Welcome.

74. St. James Parish is already one of the most heavily industrialized parishes in the state of Louisiana.

75. Four of the top five current toxic chemical releasers in St. James Parish are within four miles of Formosa Plastics' site.

76. The air emissions that result from the dense industrial activities that LDEQ has permitted have a cumulative adverse impact that disproportionately affects minority communities in the area of Formosa Plastics' site.



77. Analysis conducted by The Advocate shows that St. James Parish is already "more toxic with cancer-causing chemicals than 99.6% of industrialized areas in the country." The study concludes that if Formosa operates as permitted, the emissions from the Chemical Complex would expose area residents to "more than triple" the toxic levels of cancer-causing chemicals as they currently suffer.

78. EPA's Toxic Release Inventory (TRI) ranks St. James Parish 56 of the 2,300 ranked counties in the U.S. for total toxic releases per square mile.

79. According to EJScreen, the people who live within three miles of the center of the proposed Formosa Plastics facility site have a greater potential for exposure to PM<sub>2.5</sub>, greater risk of cancer from toxic air pollution, and greater risk of respiratory illness than more than 75% of Louisiana's population.

80. The modeling in the record shows NAAQS violations in St. James Parish for at least the NO<sub>2</sub> 1-hour standard and the PM<sub>2.5</sub> 24-hour.

81. The modeling in the record shows increment consumption for the PM<sub>2.5</sub> 24-hour standard.

#### ***Formosa Plastics and Its Poor Compliance History***

82. FGLA LLC, the entity to which LDEQ issued the Permits, is part of Formosa Plastics Group, a Taiwanese-based conglomerate. Formosa Plastics Group is also the parent company of Formosa Plastics Corporation, U.S.A (FPC). FPC owns and operates Formosa Plastics' existing chemical plants in Baton Rouge and Point Comfort, Texas. Both of these plants, like Formosa Plastics' proposed Chemical Complex, make plastics or the building blocks for making plastics. For ease of reference, and because all of these entities are ultimately owned or controlled by the same company, they are referred to in this section collectively as "Formosa Plastics."

83. In the U.S., at least 98 state or federal civil enforcement cases have been filed against Formosa Plastics, 53 of which were for Clean Air Act violations.

84. In Louisiana, Formosa Plastics has consistently failed to remedy documented violations at its Baton Rouge facility, where the facility has registered "high priority violations" of the Clean Air Act *every single month* since August 2009. All of these high priority violations

include excessive emissions of vinyl chloride, a known human carcinogen.

85. Over the last two years, the Baton Rouge facility has been subject to one formal RCRA enforcement action and four formal Clean Air Act enforcement actions, including a federal penalty of \$277,200 for, *inter alia*, failure to correct deficiencies reported in its 2008 and 2011 compliance audits. In addition, in 2007, Louisiana fined Formosa Plastics over \$4 million after an operator at the Baton Rouge facility opened the bottom valve on the wrong reactor, releasing 8,000 pounds of vinyl chloride into the atmosphere.

86. In 2009, Formosa Plastics was required to spend more than \$10 million on pollution controls to address air, water, and hazardous waste violations at the plants in Point Comfort and Baton Rouge, in addition to paying \$2.8 million in civil penalties.

87. In June 2019, the United States District Court for the Southern District of Texas found Formosa Plastics liable for "enormous" violations of the Clean Water Act and concluded that "Formosa is a serial offender," because Formosa Plastics allowed the ongoing, long-term discharge of plastic pellets, similar to those Formosa Plastics' Chemical Complex would produce, into nearby waterways that are home to important commercial and recreational fishing grounds. The Court granted monetary and injunctive relief against Formosa Plastics for 1,149 continuous days of discharging plastic pellets in violation of the Clean Water Act, and for failure to report those violations to state or federal authorities as required by Formosa Plastics' permits. Following the ruling, Formosa Plastics entered into a federal consent decree worth \$50 million, including funding for clean-up efforts, further pollution controls, and additional monitoring.

88. In 2016, a Formosa Plastics subsidiary caused a chemical spill in Vietnam, referred to as Vietnam's worst environmental disaster. The spill caused mass die-offs of fish in waters off central Vietnam's coast. Formosa Plastics paid a \$500 million fine, ordered by the Vietnamese government, in compensation for releasing chemicals like cyanide into the water. The spill affected more than 40,000 workers who rely on fishing and tourism. In 2017, an environmental justice group discovered that a Formosa Plastics plant in Taiwan exceeded emission standards over 25,000 times and never paid the proper fines for those emissions.

***The Permits LDEQ Issued for Formosa Plastics' Planned Chemical Complex***

89. LDEQ issued a PSD permit and 14 Title V (or Part 70) permits to Formosa

Plastics to build 14 separate facilities that are each a Clean Air Act "major source." The facilities include 10 chemical manufacturing plants, plus 4 support facilities. The 10 chemical plants would manufacture ethylene, propylene, ethylene glycol, high density polyethylene, low density polyethylene, linear low density polyethylene, and polypropylene. Each plant will produce either plastic pellets, or chemicals to be used in applications like plastics production. The four support units include electric power and steam generating facilities, a wastewater treatment plant, storage and loading operations, and associated emission control systems.

90. LDEQ issued PSD-LA-812, which is the PSD preconstruction permit that covers the whole Chemical Complex. In addition, LDEQ issued 14 separate Title V (or Part 70) permit for each process unit or plant that comprises the complex. They are as follows:

Permit	Process Unit
3141-V0	Ethylene 1 Plant
3142-V0	Ethylene Glycol 1 Plant
3143-V0	High Density Polyethylene 1 Plant
3144-V0	Linear Low Density Polyethylene Plant
3145-V0	Propylene Plant
3146-V0	Polypropylene Plant
3147-V0	Logistics Plant
3148-V0	Utility 1 Plant
3149-V0	Central Water Treatment Plant
3150-V0	Ethylene 2 Plant
3151-V0	Ethylene Glycol 2 Plant
3152-V0	High Density Polyethylene 1 Plant
3153-V0	Low Density Polyethylene Plant
3154-V0	Utility 2 Plant

91. Following is a description of the process authorized by each of the Title V permits:

- Ethylene 1 Plant (Permit No. 3141-V0) & Ethylene 2, Permit No. 3150-V0: The two ethylene plants, known as "ethylene crackers" would produce ethylene by thermally cracking ethane for use as a raw material in other plants at the complex. Formosa Plastics also intends to export ethylene and/or import ethylene from an off-site pipeline.
- Ethylene Glycol 1 Plant (Permit No. 3142-V0) & Ethylene Glycol Plant 2 (Permit No. 3151-V0): The two ethylene glycol plants would produce glycols, primarily

monoethylene glycol (MEG) and some diethylene glycol (DEG) and polyethylene glycol (PEG), by first reacting ethylene and oxygen to form ethylene oxide, then catalytically converting the ethylene oxide into glycols using carbon dioxide and water.

- High Density Polyethylene (HDPE) 1 Plant (Permit No. 3143-V0) & HDPE 2 Plant (Permit No. 3152-V0): The two HDPE plants would produce pellets by polymerizing ethylene using comonomer (1-butene), hydrogen, hexane, and several catalysts.
- Linear Low Density Polyethylene (LLDPE) Plant (Permit No. 3144-V0): The LLDPE Plant would produce various grades of LLDPE pellets by polymerizing ethylene using a variety of comonomers, catalysts, and additives.
- Low Density Polyethylene (LDPE) Plant (Permit No. 3153-V0): The LDPE Plant (which is different from the LLDPE Plant) would produce various grades of LDPE pellets by polymerizing ethylene using a variety of comonomers, catalysts, moderators, modifiers, initiators, and additives.
- Propylene Plant (Permit No. 3145-V0): The Propylene Plant would produce polymer-grade propylene via dehydrogenation of propane over a catalyst, the majority of which Formosa Plastics plans to use as a raw material for the Polypropylene Plant.
- Polypropylene Plant (Permit No. 3146-V0): The Polypropylene Plant would produce various grades of polypropylene by polymerizing propylene with comonomers and a variety of modifiers to adjust molecular weight and physical properties.
- Logistics Plant (Permit No. 3147-V0): The Logistics Plant would include the storage and loading facilities for the liquid and gaseous products that Formosa Plastics would produce at the Complex.
- Utility 1 Plant (Permit No. 3148-V0): The Utility 1 Plant would include two boilers for the production of steam to support facility operations, air compressors, and a raw water/demineralized water treatment plant.
- Utility 2 Plant (Permit No. 3154-V0): The Utility 2 Plant would provide additional equipment for the production of steam and electricity, including two gas turbines with heat recovery generators (HRSGs) and a boiler.

- Central Wastewater Treatment Plant (CWTP) (Permit No. 3149-V0): The CWTP would include systems for the treatment of organic and inorganic wastewater streams, as well as sludge generated by these treatment trains.

92. Upon information and belief, LDEQ has never issued as many initial air permits at one time to a company to build an industrial complex as large as Formosa Plastics' planned Chemical Complex.

93. The tables below show the total emissions that the Permits authorize Formosa Plastics to emit from the entire complex in tons per year (TPY). The first table shows the Criteria Pollutants, which are pollutants for which ambient air quality standards have been set, including volatile organic compounds (VOC), which are a precursor for ozone, also known as ground-level smog. This table also includes greenhouse gas emissions. The second table shows toxic air pollutants, which are pollutants listed in LAC 33:5112, Tables 51.1 and 51.3. These pollutants are known or suspected to cause cancer or other serious health effects, such as reproductive effects, or to cause adverse environmental effects. Except for ammonia, hydrogen sulfide, and sulfuric acid, these pollutants are also classified as VOC and are included in the VOC total in the Criteria Pollutants table.

Criteria Pollutants (TPY)

Pollutant	Emissions
Particulate matter 10 (PM <sub>10</sub> )	363.86
Particulate matter 2.5 (PM <sub>2.5</sub> )	339.81
Sulfur dioxide (SO <sub>2</sub> )	82.90
Nitrogen oxides (NO <sub>x</sub> )	1242.53
Carbon monoxide (CO)	2768.93
Volatile organic compounds (VOC)	1667.89
Carbon dioxide equivalents (CO <sub>2e</sub> )	13,628,091

## Toxic Air Pollutants (TAP)

Pollutant	Emissions
1,3-Butadiene	23.89
Acetaldehyde	17.78
Ammonia	436.75
Benzene	36.58
Cumene	1.13
Dibutyl phthalate	0.01
Dimethyl sulfate	0.08
Ethyl benzene	0.46
Ethylene glycol	44.76
Ethylene oxide	7.70
Formaldehyde	8.90
Hydrogen sulfide	0.13
Methanol	0.01
Naphthalene	0.16
n-Hexane	146.72
Phenol	0.11
Propionaldehyde	0.48
Sulfuric acid	6.02
Styrene	0.82
Toluene	8.41
Vinyl acetate	59.81
Xylene	2.18
Total	802.95

## *Air Quality & PSD*

### Modeling

#### *Consultation requirements with EPA Region 6 on Class I Modeling*

94. As discussed above, Appendix W mandates the "screening approach" that Formosa Plastics was required to follow "[t]o determine if a compliance demonstration for NAAQS and/or PSD increments may be necessary beyond 50 km (i.e., long-range transport assessment)." 40 C.F.R. § Pt. 51, App. W, 4.2.c. As to the first step, Formosa Plastics stipulated that its project would cause significant ambient impact on the Breton Wilderness Class I area at 50 km.

95. Because Formosa Plastics stipulated that its project would cause a significant impact at 50 km, it was required to conduct further assessment. This step 2 assessment required Formosa Plastics to consult with EPA Region 6 to determine the appropriate modeling method before it conducted its modeling.

96. Formosa Plastics never consulted with EPA Region 6 to determine the appropriate modeling method before it conducted its modeling.

97. Because Formosa Plastics failed to comply with the mandatory air modeling requirements in Appendix W, Formosa Plastics' Class I modeling is invalid.

#### *Ambient Air Modeling Requirements*

98. Louisiana air regulations do not exempt air located at Formosa Plastics' site from the definition of "ambient air" for the purpose of complying with PSD requirements. That is, the air that is at Formosa Plastics' site is part of the "ambient air" that is subject to PSD air quality regulations and must meet the NAAQS and not contribute to overconsumption of NAAQS increments.

99. Formosa Plastics' NAAQS and Class II increment modeling is inaccurate because it analyzed ambient air quality beginning at the edge of its 2400-acre site rather than at the location of its planned Chemical Complex within the site.

100. Formosa Plastics asserted that it could substitute more permissive guidance offered by EPA that would allow it exempt from the "ambient air," areas to which the public is both legally and practically barred from access. This is incorrect. But, assuming for the sake of

argument that this guidance applied, Formosa Plastics' modeling did not meet even this more lenient standard. There are areas within the Chemical Complex to which members of the public may have access. Formosa Plastics is not fencing its entire site, or otherwise controlling access to the entire site. The public will be able to access the wetland areas located primarily southwest of Highway 3127. The public will also be able to access the St. James Canal, which runs through the back portion of the property and is popular for fishing. For this reason, Formosa Plastics failed to follow EPA's more permissive modeling guidance, which allows modeling of ambient air to begin outside the area of controlled access.

*Failure to use a Consistent Class II Increment Modeling Method*

101. Formosa Plastics' Class II increment modeling of PM<sub>10</sub> and PM<sub>2.5</sub> violates applicable regulations because it does not comply with 40 C.F.R. Part 51, Appendix W or LAC 33:III.509.L requirements. Formosa Plastics' use of 2016 "actual emissions" was improper, it deviated from its agreed protocol, it failed to document its method for determining which regional sources to include in the increment analysis for PM<sub>2.5</sub>, it failed to include a trigger date for baseline emission, it failed to provide a rationale for PM<sub>2.5</sub> speciation, and it failed to create a documented inventory of other sources included in the Class II increment model.

102. Because Formosa Plastics failed to comply with PSD modeling requirements, there is no basis for LDEQ's conclusion that Formosa Plastics has minimized air quality effects by complying with applicable regulations. Therefore, LDEQ should not have approved Formosa Plastics' air quality modeling in its decision to issue the Permits.

NAAQS & Increments

103. The air quality analysis shows exceedances of the NAAQS.

104. The PM<sub>2.5</sub> 24-hour maximum modeled concentration, plus background, is 51.66 µg/m<sup>3</sup>, exceeding the NAAQS limit of 35 µg/m<sup>3</sup>.

105. The NO<sub>2</sub> 1-hour maximum modeled concentration, plus background, is 422.53 µg/m<sup>3</sup>, which vastly exceeds the NAAQS limit of 189 µg/m<sup>3</sup>.

106. Modeling for PM<sub>2.5</sub> 24-hour shows increment consumption at receptor locations.

107. Modeling for PM<sub>2.5</sub> and NO<sub>x</sub> show that the planned Chemical Complex will contribute to NAAQS violations and exceedance of a Class II increment.



108. Formosa Plastics therefore did not demonstrate that its PM<sub>2.5</sub> emissions will “not cause, or contribute to” an exceedance of the PM<sub>2.5</sub> 24-hour NAAQS as Louisiana PSD regulations require. Rather, Formosa Plastics’ own modeling shows that Formosa Plastics would contribute to violations of the PM<sub>2.5</sub> 24-hour NAAQS.

109. Formosa Plastics did not demonstrate that its PM<sub>2.5</sub> emissions will “not cause, or contribute to” consumption of PM<sub>2.5</sub> 24-hour increments as Louisiana PSD regulations require. Rather, Formosa Plastics’ own modeling shows overconsumption of the PM<sub>2.5</sub> 24-hour increment for the area that contains the Chemical Complex.

110. Formosa Plastics did not demonstrate that its NO<sub>x</sub> emissions will “not cause, or contribute to” an exceedance of the NO<sub>2</sub> 1-hour NAAQS as Louisiana PSD regulations require. Rather, Formosa Plastics’ own modeling shows that Formosa Plastics would contribute to violations of the NO<sub>2</sub> 1-hour NAAQS.

111. Because Formosa Plastics’ own modeling clearly shows that the area in which it plans to construct its Chemical Complex will be located is in non-attainment for the 1-hour NO<sub>x</sub> and PM<sub>2.5</sub> 24-hour NAAQS, Formosa Plastics should have been required to meet non-attainment new source review regulations under LAC 33:111.504, the Louisiana SIP, and the Clean Air Act.

112. LDEQ concluded that Formosa Plastics’ emissions will not cause or contribute to an exceedance of any NAAQS or increment consumption by invoking an extra-legal method set out in its Air Quality Monitoring Procedures, which provides: “if the maximum contribution from the proposed project is less than the significance level at the receptor(s) and time(s) of the potential exceedance(s), the proposed project will not cause nor significantly contribute to the potential NAAQS exceedance(s).” This extra-legal method is called herein the “Significant Impact Level Policy.”

113. The “Significant Impact Level Policy” LDEQ applied violates the Clean Air Act and Louisiana air regulations implementing PSD requirements and is also arbitrary and capricious as applied in this case. LDEQ cannot authorize a violation of the NAAQS, and any such attempt runs counter to the Clean Air Act’s clear mandate that EPA set the NAAQS at a level that is “requisite to protect the public health,” with “an adequate margin of safety.” 42 U.S.C. § 7409(b)(1). The Supreme Court has construed this mandate as requiring the NAAQS to

be set at levels "not lower or higher than is necessary – to protect the public health with an adequate margin of safety." *Whitman v. Am. Trucking Ass'ns*, 531 U.S. 457, 475-76 (2001).

Because by law the NAAQS must already reflect the absolute pollution limit requisite to protect health, LDEQ cannot specify that pollution levels higher than the NAAQS are permissible.

114. In addition, LDEQ's use of Significant Impact Levels to dismiss Formosa Plastics' contribution to NAAQS exceedances and increment consumption is arbitrary and capricious.

115. For instance, PM<sub>2.5</sub> emissions are particularly harmful, and can be deadly. In October 2018, the EPA released a draft review of the public health impact of fine particulate pollution. After assessing nearly 2,800 studies in its 1,900-page report, the agency concluded that the science supported lowering the annual exposure limit for PM<sub>2.5</sub> by as much as one third. Further, a new study published in the Journal of the American Medical Association (JAMA) Network Open on November 20, 2019 found links between chronic PM<sub>2.5</sub> exposure and nearly 200,000 deaths.

116. NO<sub>2</sub> is associated with reduced lung function, asthma, breathing problems, and increased emergency room and hospital visits.

117. LDEQ failed to take into consideration the harmful effects of Formosa Plastics' PM<sub>2.5</sub> emissions, especially as detailed by EPA and the new study published in JAMA. LDEQ failed to address the NO<sub>2</sub> NAAQS exceedances and increment overconsumption.

#### ***Potential to Emit***

118. Formosa Plastics' permit applications underestimate the Chemical Complex's "potential to emit" pollutants. This is a central issue, because Formosa Plastics' potential-to-emit estimates formed the inputs for air quality modeling of the Chemical Complex's emissions. The estimates also informed analysis of the cost-effectiveness and necessity of pollution control technologies and monitoring and recordkeeping requirements.

119. Formosa Plastics' permit applications rely on emissions factors to determine the complex's potential to emit, which are not based on the maximum capacity of the source to emit air pollutants under its physical and operation design, but instead are based, at best, on average emissions from a source category.

120. Formosa Plastics' application provides "potential to emit" for VOC emissions based on EPA data that reflects source averages, not the maximum.

121. There is no support in the record for many of Formosa Plastics' emissions assumptions. For instance, Formosa Plastics assumed that its flares would have destruction efficiency rates of 98 or 99 percent, regardless of the flare type, the waste gas composition, or the flow rate to the flare. Formosa Plastics cited no active guidance justifying this assumption, particularly since a flare's actual destruction efficiency is heavily dependent on operating conditions. To represent true "potential to emit," Formosa Plastics should have assumed the lowest potential destruction efficiencies for each flare.

122. There is no support in the record for Formosa Plastics' assumption that the thermal oxidizers can destroy VOCs at a rate of 99.9 percent. This is especially important because the cancer-causing ethylene oxide emissions were calculated based on this assumption. Further, the permit does not include requirements that Formosa Plastics install thermal oxidizers that can achieve a 99.9 destruction efficiency rate.

123. LDEQ failed to require Formosa Plastics to revise its "potential to emit" estimates using emissions data that reflect maximum potential emissions and that are supported by verifiable and relevant data.

124. Formosa Plastics' unsupported PM<sub>2.5</sub> speciation serves to underestimate emissions and therefore ambient impacts.

125. LDEQ's decision to issue the Permits relies on Formosa Plastics' underestimated "potential to emit" estimates for PM<sub>2.5</sub>, NO<sub>x</sub>, and VOC.

126. Because Formosa Plastics underestimated the Chemical Complex's PTE, the health and environmental impacts of the complex's PM<sub>2.5</sub>, NO<sub>x</sub>, and VOC emissions are underestimated.

#### *Toxic Pollutant*

127. The Permits allow Formosa Plastics to emit over 800 tons (or 1,600,000 pounds) per year toxic air pollutants, which, upon information and belief, would double the amount of toxic emissions currently released parish-wide on a yearly basis from existing industrial facilities.

128. Many of the toxic air pollutants that Formosa Plastics would emit are known to cause cancer in humans.

129. The most hazardous of the plants that Formosa Plastics plans to build in terms of cancer-causing air pollutants are the two ethylene production plants known as "ethylene crackers" and the two ethylene glycol plants. The two ethylene crackers would be permitted to emit the majority of the 1,3-butadiene and benzene emissions at the complex, and the two ethylene glycol plants would be responsible for all of the complex's ethylene oxide emissions. These four plants would be located toward the front of Formosa Plastics' 2400-acre site closest to area residences and the elementary school.

130. The Integrated Risk Information System ("IRIS") program is an independent, scientist-led office at EPA, intentionally insulated from regulatory processes to ensure a health-protective and science-based approach. EPA IRIS values represent the best available science on the human health effects associated with exposure to various chemicals, and are "the preferred source of toxicity information used by EPA." There are several IRIS toxicity values that express inhalation risk. The most common values are the inhalation unit risk and reference concentration value, used for cancer and noncancer assessments respectively.

131. Formosa Plastics' maximum modeled concentrations of ethylene oxide and vinyl acetate exceed EPA's IRIS value, which means that they exceed the "continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime."

132. EPA developed the Risk-Screening Environmental Indicators ("RSEI") model, which is publicly available. The model calculates the estimated chemical concentrations from industry-reported toxic industrial plant emissions across the country down to 810-by-810-meter blocks, providing focused information that highlights the risk to fence-line and other communities located near toxic facilities. The RSEI model "incorporates information from the [EPA's] Toxics Release Inventory (TRI) on the amount of toxic chemicals released, together with factors such as the chemical's fate and transport through the environment, each chemical's relative toxicity, and potential human exposure."

133. The RSEI model is the best available tool for understanding which high-pollution areas warrant further scrutiny. As EPA explains,

[The RSEI] model helps policy makers, researchers and communities explore data on releases of toxic substances from industrial facilities. RSEI incorporates information from the Toxics Release Inventory (TRI) on the amount of toxic chemicals released, together with factors such as the chemical's fate and transport through the environment, each chemical's relative toxicity, and potential human exposure. RSEI Scores can be used to help establish priorities for further investigation.

134. Using the RSEI model, The Advocate and ProPublica sponsored a study where an air quality modeling expert analyzed Formosa Plastics' expected toxic emissions in combination with toxic emissions from existing emission sources in the area. The study concluded that Formosa Plastics' toxic emissions would triple the levels of cancer-causing chemicals residents who live one mile east and downriver of Formosa Plastics' site in Welcome are exposed to, and double the levels of cancer-causing chemicals residents who live across the river from Formosa Plastics' site in Union are exposed to.

135. The Advocate and ProPublica study found "that the air around Formosa's site is more toxic with cancer-causing chemicals than 99.6% of industrialized areas of the country" already, and that "[i]f the complex emits all the chemicals it proposes in its permit application, it would rank in the top 1% nationwide of major plants in America in terms of the concentrations of cancer-causing chemicals in its vicinity."

136. Neither Formosa Plastics nor LDEQ used the RSEI model to analyze Formosa Plastics' toxic emissions.

137. Neither Formosa Plastics nor LDEQ analyze the *total risk* that would result from Formosa Plastics' total carcinogenic emissions *on top of* existing cancer risk using EPA's IRIS values to accurately reflect the increased lifetime health risk to surrounding communities.

138. LDEQ's ambient air quality standards for toxic pollutants are outdated and do not rely on the most current, best available science.

#### Ethylene Oxide

139. According to EPA, ethylene oxide is linked to breast cancer, non-Hodgkin lymphoma, and lymphocytic leukemia. In addition to significant cancer risks, the Agency for Toxic Substances and Disease Registry ("ATSDR") warns that acute respiratory exposure to

ethylene oxide may cause narrowing of the bronchi and partial lung collapse. Inhalation of ethylene oxide can also produce central nervous system depression, and in extreme cases, respiratory distress and coma. The ATSDR also notes that children may be more vulnerable to ethylene oxide exposure, especially chronic exposure. EPA and the ATSDR have also warned that inhalation exposure to ethylene oxide can lead to spontaneous abortions.

140. Based on 2017 EPA's Toxic Release Inventory ("TRI"), only two other sources in the U.S., and one source in the state, reported actual ethylene oxide emissions that exceed the 7.70 tons per year or 15,400 pounds per year limit that the Permits allow Formosa to emit.

141. In 2016, EPA scientists in the agency's IRIS program produced an updated risk value for ethylene oxide exposure. The IRIS program found ethylene oxide is far more carcinogenic than previously understood, and linked long-term exposure to ethylene oxide to increased risk of cancers of the white blood cells, including non-Hodgkin lymphoma, myeloma, and lymphocytic leukemia, as well as breast cancer in females.

142. The IRIS program produced its updated ethylene oxide risk value following a rigorous, 10-year long, peer-reviewed process, including public notice and comment. IRIS determined that the "full lifetime total cancer unit risk estimate," including age-dependent adjustment factors due to early-life inhalation exposure to ethylene oxide, is  $5.0 \times 10^{-4}$  or 0.005 per  $\mu\text{g}/\text{m}^3$ . The commensurate chronic (lower-bound) exposure level of ethylene oxide corresponding to an increased cancer risk of  $10^{-6}$  (1-in-1 million) is  $2 \times 10^{-4}$  or 0.0002 per  $\mu\text{g}/\text{m}^3$ . IRIS determined that EPA has "relatively high" confidence in the unit risk estimate, "based on strong epidemiological evidence supplemented by other lines of evidence," including "a large, high-quality epidemiology study with individual worker exposure estimates," and found that the method of linear low-exposure extrapolation used "is strongly supported," and that "[c]onfidence . . . is particularly high for the breast cancer component," based on "over 200 incident cases."

143. Other scientists and health experts have independently confirmed EPA's findings, including the National Toxicology Program, the International Agency for Research on Cancer, and the Occupational Safety and Health Administration.

144. EPA's 2014 National Air Toxics Assessment, relying on the most recent IRIS data, estimated that ethylene oxide "significantly contributes to potential elevated cancer risks in

some census tracts across the U.S." The report found that Cancer Alley census tracts were among the most at-risk areas in the country.

145. The results of National Air Toxics Assessment were intended to help EPA and state agencies like LDEQ identify which pollutants, emission sources and places they may wish to study further to better understand any possible risks to public health from air toxics.

146. Some state agencies have reacted to this information with deep concern and concrete action. For instance, ethylene oxide's alarming risk potential has led to regulatory efforts and the recent closure of plants that emitted the chemical in Georgia and Illinois.

147. In light of this information, EPA is in the process of amending its regulations of ethylene oxide emissions from several source categories. In December 2019, EPA proposed a rule to amend National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Manufacturing (i.e., the "proposed MON rule," which is aimed at reducing ethylene oxide. See 84 Fed. Reg., 69,182 (Dec. 17, 2019).

148. The ethylene oxide emissions authorized by LDEQ in the Permits would allow nearly as much ethylene oxide as EPA's proposed MON rule aims to eliminate.

149. Ethylene oxide is a principal culprit for the approximately 100 census tracts in the nation whose cancer risks exceed the level EPA considers acceptable.

150. Formosa Plastics' modeled maximum ground-level concentration of ethylene oxide show that these emissions would lead to a 1,320 to 7,764 percent increase over 2014 background ethylene oxide exposure concentrations in the census tracts surrounding Formosa Plastics' site.

151. Formosa Plastics' modeled ground-level ethylene oxide concentration is also at least two thousand times greater than the IRIS risk value for ethylene oxide.

152. Formosa Plastics' own modeling concluded that ethylene oxide concentrations in amounts greater than what EPA considers to be the upper limit of an acceptable risk (i.e., 0.02  $\mu\text{g}/\text{m}^3$  or 1-in-10,000 cancer risk, which is EPA's upper limit of an acceptable risk) would extend across the Mississippi River to the residential community of Union.

153. Formosa Plastics' ethylene oxide concentrations that exceed the 1-in-100,000 risk level would extend to the Fifth Ward Elementary school, Welcome, and much of Convent, which

is the location of the parish court and other important parish functions.

154. Formosa Plastics' ethylene oxide concentrations that exceed the 1-in 1,000,000 risk level would extend as far as Paulina in District 3.

155. Both chronic and acute ethylene oxide inhalation exposure can produce more severe health impacts, including increased cancer risk, in children due to their relatively higher respiratory minute volume as compared to adults. EPA guidance states that age-dependent adjustment factors should be used to account for these enhanced risks to children.

156. LDEQ did not consider increased cancer risk that Formosa Plastics' ethylene oxide emissions pose to children. This omission is especially egregious given that in Formosa Plastics' Supplemental Environmental Assessment Statement, the 0.02  $\mu\text{g}/\text{m}^3$  boundary for its ethylene oxide emissions appears to reach the residential community of Union and is less than a quarter of a mile west of the closest church and Fifth Ward Elementary School, which serves hundreds of pre-kindergarten to sixth grade students.

157. LDEQ did not account for pre-existing cancer risk in the area, nor did it perform an analysis of how Formosa Plastics' cancer-causing emissions will contribute to cumulative cancer risk in the surrounding area, as recommended by EPA in the National Air Toxics Assessment.

158. Louisiana's Toxic Air Pollutant Ambient Standards certainly do not reflect or address this new science. At most, they include annual exposure standards, though some chemicals only have 8-hour standards for acute exposure (i.e., n-Hexane, Propionaldehyde, and Ammonia). See LAC 33:III.5112, Table 51.2. Many of these standards are based on outdated information that does not represent the best available science. See *id.* at Historical Note (showing last amendment in Dec. 2007). Generally, EPA's IRIS values, reflected in the National Air Toxics Assessment, represent lifetime risk, i.e. daily inhalation exposure over 70 years. For this reason, it is critical that LDEQ require Formosa Plastics to use the IRIS cancer assessment values when conducting its full analysis.

159. LDEQ did not analyze the long-term cancer risk posed by Formosa Plastics' ethylene oxide emissions.

160. LDEQ's reliance on the Louisiana Tumor Registry to attempt to discredit EPA's



National Air Toxics Assessment for ethylene oxide or to assess cancer risk from toxic pollutants is misleading and inappropriate.

161. The Louisiana Tumor Registry data has limited use and the data cannot be used to determine cancer risk from a specific exposure in an area.

162. LDEQ's review of the Louisiana Tumor Registry data is scientifically unsound because it does not account for ethylene oxide exposure and instead assumes that potential exposure to health hazards is restricted to the boundaries of pre-defined, and irregularly shaped census tracts.

163. LDEQ's review of the Louisiana Tumor Registry data is also scientifically unsound because it fails to control for other factors that influence cancer rates or the latency period for cancers associated with ethylene oxide exposure, among other reasons.

164. LDEQ's reference to naturally occurring levels of ethylene oxide created by the human body has no bearing on the IRIS risk value for ethylene oxide, which quantifies cancer risk above background levels *including* endogenous levels of ethylene oxide produced by the human body.

165. Even if LDEQ's reliance on the Louisiana Tumor Registry in this context was somehow appropriate, LDEQ acknowledged that the data does not address white blood cell cancers such as non-Hodgkin lymphoma, myeloma, and lymphocytic leukemia, cancer risks to which EPA found ethylene oxide significantly contributes.

166. The Texas Council on Environmental Quality's recommended ethylene oxide risk factor that LDEQ references for support is not based on independent, peer-reviewed science.

#### *Monitoring*

167. The Permits do not include fence-line air quality monitoring requirements along its eastern property boundary—emissions of 1,3-butadiene, vinyl acetate, ethylene oxide, and benzene. Instead, LDEQ impermissibly relies on a St. James Parish Council Resolution that the Parish can rescind at any time. The Permit states that Formosa Plastics must “[c]omply with the air quality monitoring provisions set forth in Resolution 19-07 of the St. James Parish Council.” The resolution does not establish a deadline by which Formosa must install and operate the fence-line monitoring. There is no requirement that Formosa submit its fence-line monitoring

reports to LDEQ, and no provision requiring the Parish to make the reports available to LDEQ or the public.

168. LDEQ claims that it will require Formosa Plastics to place monitors along a portion of its property but the Permits contain no such requirement.

169. LDEQ did not require Continuous Emissions Monitors (CEMS)—which directly measures emissions—for all sources where CEMS is available.

170. CEMS are necessary to assure compliance with emissions limits, and to make permits enforceable by the public.

171. Instead, LDEQ relied upon calculations as a proxy for actual emissions. These calculations are based on numerous process assumptions (such as process rates, stream compositions, temperatures, pressures, geometry parameters and the like) that are neither verifiable nor ultimately enforceable. Further, the numerous process assumptions are not provided to the public.

172. In particular, the failure to require CEMS where possible renders certain permit conditions unenforceable, such as the following Louisiana Air Emission Permit General Condition provided in each of the proposed Title V permits stating, "Failure to install, properly operate, and/or maintain all proposed control measures and/or equipment as specified in the application and supplemental information shall be considered a violation of the permit and LAC 33:III.501." LAC 33:III.551, Table 1, 1.

173. LDEQ failed to provide a reasonable rationale for failing to require CEMS for various combustion sources.

174. The Title V permits do not require stack tests with the required frequency where CEMS are not available.

175. The Title V permits do not contain conditions for all assumptions used to calculate the potential to emit where there are no requirements for CEMS.

#### *Greenhouse Gases*

176. Upon information and belief, the greenhouse gases allowed by the Permits exceed permitted emissions for any new industrial source constructed in the United States since at least 2012.

177. The greenhouse gases the Permits allow, at 13.6 million tons per year, are roughly equivalent to annual emissions of 3.5 average-sized coal-fired power plants, or approximately 2.89 million passenger vehicles.

178. The greenhouse gases greenhouse gases would equal 6.5% of Louisiana's total energy related emissions in 2016, or 11% of the state's carbon emissions from its industrial sector in 2016.

179. Some of the adverse impacts associated with climate change include accelerated sea level rise and associated human displacement, extreme weather events, increased ambient temperatures, altered precipitation patterns, ocean acidification, and loss of habitat and species.

180. Greenhouse gas-induced climate change effects are particularly observable in coastal Louisiana, which is suffering tremendous land loss due to sea level rise, increased storm intensity, and flooding.

181. LDEQ failed to assess the climate-related impacts of the greenhouse gas emissions that it authorized Formosa to emit.

182. LDEQ failed to consider the social costs associated with the greenhouse gases that it authorized Formosa Plastics to emit.

183. LDEQ has also failed to consider the cumulative climate-related impacts and social costs of the greenhouse gases it has authorized Formosa Plastics to emit when added to other past, present, and foreseeable large sources of greenhouse gases in the state.

#### *Historic Burial Sites of Formerly Enslaved Persons*

184. In its Basis of Decision, LDEQ concluded that it had avoided adverse effects to the maximum extent possible on burial sites at the Chemical Complex that contain or might have contained the remains of people once enslaved on the antebellum plantations that occupied the same site.

185. Formosa Plastics initially concluded, in its first Environmental Assessment Statement, that there were no burial or other historical sites present on the property that could encumber its construction plans. But in July 2018, an independent researcher provided maps that indicated the locations of at least two burial sites.

186. After learning of the independent evidence of burial sites, Formosa Plastics' attorney emailed the state Attorney General's office, which reached out to the State Division of Archaeology on Formosa Plastics' behalf. Formosa Plastics' attorney wished to avert the "very difficult" burden on Formosa Plastics of altering its site plan to avoid building on top of any burial sites of formerly enslaved persons, should they be unearthed. Formosa Plastics' attorney asked if the state could simply issue a permit to exhume any remains "quickly, within days," to allow onsite activities to move ahead, presumably prior to identifying the remains and attempting to notify any descendants.

187. Formosa Plastics then undertook follow-up archaeological investigations at the site. LDEQ relied on the Division of Archaeology's approval of these reports, in which Formosa Plastics' consultant claimed that any burial grounds in areas slated for construction likely had been destroyed by previous activity on the site, and that intact burial sites discovered away from construction simply could be fenced off.

188. LDEQ never provided copies of the independent researcher's maps and findings, Formosa Plastics' archaeological reports, or any of the related correspondence between state officials and Formosa Plastics' attorneys and contractors, as part of the publicly available permit record on EDMS, nor, on information and belief, were they available on any other public internet site. RISE St. James was unaware of the contents of these records during the official public comment period.

189. Indeed, Formosa Plastics did not even submit its final survey of the burial site beneath or near the Chemical Complex's proposed utility plant until after LDEQ had released the draft Permits and began the public comment period. The report's release was nearly 6 months after Formosa Plastics' last Environmental Assessment Statement discussing cultural resource issues.

190. RISE St. James discovered the full set of these documents only after its attorneys completed public records requests.

191. RISE St. James's membership is predominantly comprised of African-American residents of St. James Parish, some of whom trace their ancestry to persons who were enslaved in the very same area.

192. On December 18, 2019, RISE St. James submitted a comment letter to LDEQ, outlining its discovery of the state's and Formosa Plastics' handling of the burial sites issue. RISE St. James described its strong interest, as a group representing area residents descended from the victims of slavery, in how the state and Formosa Plastics conducted the assessment of risks to burial sites on the Chemical Complex property. RISE St. James explained the need for affected local communities to be consulted in that process.

193. RISE St. James expressed its concern that more burial sites may exist in the area that Formosa Plastics' project could damage, and that the Formosa Plastics' reports may not be complete. Indeed, it would be against Formosa Plastics' economic interest to conduct a full, rigorous study of the site to ensure that any impacts on cultural resources would be avoided to the maximum extent possible.

194. But prior to issuing the Permits, LDEQ failed to respond to RISE St. James's comment letter or to consult with RISE St. James, its membership, other area residents or scholars, or even the state of Louisiana's Slavery Ancestral Burial Grounds Preservation Commission, about their interests in the area or potential knowledge of cultural resources onsite. Rather, LDEQ simply deferred to review of Formosa Plastics' own surveys.

#### *Cost-benefit Analysis*

195. LDEQ's cost-benefit analysis fails to account for any costs that would be borne by the surrounding community and beyond.

196. LDEQ's analysis fails to account for the negative effect the Chemical Complex would have on property values in the area.

197. LDEQ's analysis fails to consider the negative effect the Chemical Complex would have on the area of Welcome immediately adjacent to Formosa Plastics' site and other areas of the parish in Paulina and Convent that the Parish designated in its land use plan as "Residential Growth."

198. LDEQ's cost-benefit analysis fails to include environmental or public health costs of harmful pollutants associated with Formosa Plastics' emissions and other pollution associated with plastic manufacturing.

199. LDEQ failed to consider the fact that African American communities in the area

of the Formosa Plastics site are already over-burdened with air pollution, and would disproportionately bear the adverse health effects of Formosa Plastics' emissions.

200. The benefits listed by LDEQ are inflated and unsupported.

#### *Avoidance of Adverse Environmental Effects*

201. LDEQ failed to consider whether the potential and real adverse environmental effects of the Chemical Complex's air emissions "have been minimized to the maximum extent possible" as its public trustee duty requires. Instead, LDEQ considered only the effects of the air emissions in the context of analyzing mitigating measures (i.e., whether there were mitigating measures that would offer more protection to the environment than the facility as proposed without unduly curtailing non-environmental benefits). By doing this, LDEQ failed to determine whether the harmful effects of the air emissions "have been minimized to the maximum extent possible."

#### *Alternative Projects*

202. LDEQ claims that it considered a "no build" alternative and an alternative that entails approving some of the proposed plants but rejected this alternative without providing any evidence in the record to support its conclusions.

#### ASSIGNMENTS OF ERROR

203. The PSD Permit that LDEQ issued to Formosa Plastics fails to meet Louisiana's PSD requirements under LAC:33.III.K.1, the Louisiana SIP, and 42 U.S.C. § 7475(a)(3) because Formosa Plastics failed to make the following requisite demonstrations under LAC

33:III.509.K.1:

- a. Formosa Plastics failed to demonstrate that the emissions from its planned Chemical Complex will not cause or contribute to air pollution in violation of the PM<sub>2.5</sub> 24-hour NAAQS;
- b. Formosa Plastics failed to demonstrate that the emissions from its planned Chemical Complex will not cause or contribute to air pollution in violation of the NO<sub>2</sub> 1-hour NAAQS; and
- c. Formosa Plastics failed to demonstrate that the emissions from its planned Chemical Complex will not cause or contribute to air pollution in violation of

the maximum allowable increase of PM<sub>2.5</sub> over the baseline concentration for the PM<sub>2.5</sub> 24-hour standard.

204. The PSD Permit that LDEQ issued to Formosa Plastics fails to meet Louisiana's PSD requirements and the Louisiana SIP because Formosa Plastics failed to comply with mandatory air quality modeling requirements for estimating ambient concentrations in Appendix W of 40 C.F.R. pt. 51, as required by LAC 33:III.509.L.1.

205. LDEQ's use of its Significant Impact Levels Policy to dismiss Formosa Plastics' contribution to NAAQS exceedances and increment consumption violates LAC:33.III.K.1, the Louisiana SIP, and 42 U.S.C. § 7475(a)(3).

206. LDEQ's use of its Significant Impact Levels Policy to dismiss Formosa Plastics' contribution to NAAQS exceedances and increment consumption is arbitrary and capricious, unsupported by the record, and an abuse of LDEQ's discretion in this matter.

207. LDEQ's finding that emissions from Formosa Plastics' planned Chemical Complex will not cause or contribute to a violation of a NAAQS or any ambient air quality standard is arbitrary and capricious and not supported in the record.

208. LDEQ's finding that the permits avoid air quality impacts that could adversely affect human health or the environment is arbitrary and capricious and not supported in the record.

209. LDEQ's decision to issue the Title V/Part 70 permits violates LAC 33:III.507.A.3 because those permits fail to incorporate all federally applicable requirements for each emissions unit at the source.

210. LDEQ's decision to issue the Title V/Part 70 permits violates LAC 33:III.501.C.6 because those permits fail to incorporate sufficient terms and conditions to ensure compliance with all state and federally applicable air quality requirements and standards at the source.

211. LDEQ's decision to issue the Title V/Part 70 permits violates LAC 33:III.507.11 because those permits fail to include compliance certification, testing, monitoring, reporting, and recordkeeping requirements sufficient to assure compliance with the terms and conditions of the permit as required by 40 C.F.R. § 70.6(a)(3).

212. LDEQ cannot show by a preponderance of the evidence that it has met state and federal Title V/Part 70 requirements under LAC 33:III.507.11.1; 40 C.F.R. § 70.6(c)(1).

213. In light of the errors detailed in paragraphs 203-212, LDEQ was required to deny the Permits pursuant to LAC 33:III.519.

214. LDEQ's decision to issue the Permits in light of the errors detailed in paragraphs 203-212 was arbitrary and capricious.

215. LDEQ's decision to issue the Permits was made upon unlawful procedure because the agency failed to provide reasonable responses to public comments.

216. LDEQ failed to follow the will and intent of the art. IX, § 1 of the Louisiana Constitution and the Louisiana Environmental Quality Act in making its determination to issue the Permits, in violation of La. R.S. § 30:2014.A(4).

217. LDEQ violated article IX, § 1 of the Louisiana Constitution by failing to avoid to the maximum extent possible the potential and real adverse environmental effects of the Chemical Complex.

218. LDEQ's finding that the potential and real adverse effects of the Chemical Complex have been avoided to the maximum extent possible is arbitrary and capricious.

219. LDEQ violated article IX, § 1 of the Louisiana Constitution because it failed to demonstrate on the record that it considered the real and potential cumulative adverse impacts of Formosa Plastics' toxic emissions in combination with existing permitted emissions for the area.

220. LDEQ violated article IX, § 1 of the Louisiana Constitution because it failed to demonstrate on the record that it considered the real and potential effects of Formosa Plastics' ethylene oxide emissions.

221. LDEQ violated article IX, § 1 of the Louisiana Constitution because it failed to demonstrate on the record that it considered the potential and real adverse environmental effects of Formosa Plastics' greenhouse gas emissions.

222. LDEQ violated article IX, § 1 of the Louisiana Constitution because its decision to issue the Permits would disproportionately impact communities of color.

223. LDEQ violated article IX, § 1 of the Louisiana Constitution, including its legal obligation to provide active and affirmative protection to the public, in failing to adequately



avoid and minimize harm to potential burial sites of formerly enslaved persons on the proposed site of the Chemical Complex, failing to disclose relevant information to the public prior to the comment period, and/or failing to consult with RISE St. James or other persons primarily interested in the preservation of the remains of formerly enslaved persons buried within the proposed Chemical Complex's site.

224. LDEQ violated article IX, § 1 of the Louisiana Constitution because it failed to demonstrate on the record that it considered alternative projects, mitigative measures, or conditions that would lessen real and potential harm to communities and workers posed by the operation of the Chemical Complex.

225. LDEQ's finding that there are no alternative projects, mitigative measures, or conditions that would lessen the real and potential harms to communities and workers posed by the operation of the Chemical Complex is arbitrary and capricious.

226. LDEQ's finding that the social and economic benefits of the Chemical Complex would outweigh the adverse impacts of the Chemical Complex is arbitrary and capricious and violates article IX, § 1 of the Louisiana Constitution because the agency failed to demonstrate on the record that it considered the social, health, and environmental impacts to communities and workers.

227. LDEQ violated article IX, § 1 of the Louisiana Constitution because it failed to demonstrate on the record that it conducted a cost benefit analysis that considered the adverse costs of Formosa Plastics' greenhouse gas emissions.

228. LDEQ's issuance of the Permit has prejudiced substantial rights of Petitioners because LDEQ's decision is in violation of constitutional or statutory provisions.

229. LDEQ's issuance of the Permit has prejudiced substantial rights of Petitioners because LDEQ's decision is arbitrary and capricious.


230. LDEQ's Permit issuance has prejudiced Petitioners' substantial rights, because the decision is not supported by a preponderance of evidence.

**PRAYER FOR RELIEF**

WHEREFORE, Petitioners respectfully request that this Court:

- a. Vacate LDEQ's decision to issue the Permits, enjoin all activity authorized pursuant to the Permits, and remand the matter to the agency for further consideration consistent with an order from this Court; and
- b. Award all other relief the Court finds proper.

Respectfully submitted this 14th day of February, 2020 by,



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