

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  
DIVERSITY, HEALTHY GULF,  
EARTHWORKS, and NO WASTE  
LOUISIANA,

Case No.: 694,029

Section: 27

Judge: Trudy White

Petitioners,

v.

LOUISIANA DEPARTMENT OF  
ENVIRONMENTAL QUALITY,

Defendant.

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**OPPOSITION BRIEF OF INTERVENOR FG LA LLC**

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The present action for judicial review arises out of fifteen related air emission permits issued by the Louisiana Department of Environmental Quality (LDEQ) to Intervenor FG LA LLC (FG) for the construction and operation of a proposed petrochemical complex in St. James Parish, Louisiana. LDEQ thoroughly considered the extensive administrative record and issued a detailed and carefully reasoned 43-page Basis for Decision document (along with a Supplemental Basis for Decision and a 139-page Public Comment Response Summary) explaining its rationale in granting the permits. Nevertheless, Petitioners and Intervenor Alexander argue that LDEQ violated the Clean Air Act and the public trust doctrine of Article IX, Section 1 of the Louisiana Constitution in certain respects, including by failing to “consider” and apply a plethora of analyses, standards, and methodologies that simply have not been enacted/promulgated into Louisiana law by the Louisiana Legislature or LDEQ.

Petitioners’ and Alexander’s arguments fail because they: (1) ignore the express “significance” limitations on the applicable Clean Air Act emission standards; (2) attempt to stretch the public trust doctrine far beyond anything that has ever been approved by the Louisiana courts, which have recognized the more limited nature of the doctrine; and (3) ignore LDEQ’s thorough, detailed, and reasonable justifications for rejecting the arguments raised in the present judicial review action. Stated simply, LDEQ correctly applied the Clean Air Act and acted well within its latitude of discretion under the public trust doctrine in granting FG the permits at issue. Further, the agency was not arbitrary or capricious in the manner in which it performed any constitutional duty, particularly in light of the actually applicable statutory and regulatory provisions governing the permits at issue. Petitioners and Alexander received the full and fair consideration of the information before LDEQ to which they were entitled, and their attempts to use the public trust doctrine as a carte blanche to require LDEQ to stray far beyond the applicable standards and regulations are improper. Therefore, their claims should be rejected, and LDEQ’s issuance of the air permits should be affirmed in all respects.

## **BACKGROUND**

### **I. The Proposed Project**

#### **A. Scope and Impacts**

The Sunshine Project is a state-of-the-art facility that will transform ethane and propane gases into the building blocks of everyday goods such as drainage and water supply pipes, playground equipment, car parts, computer casings, and infant car seats. R. Vol. 35, p. 3435. The proposed facility is sited in a predominantly industrial and agricultural area along the Mississippi



River in St. James Parish, just south of the Sunshine Bridge from which it gets its name. R. Vol. 14, p. 3433. The project, which will be constructed in two phases, involves three production trains based on the use of ethane and propane. A process description and diagram can be found in Appendix A to the present brief (and at R. Vol. 8, pp. 1923-1927).

St. James Parish already designated the property for industrial use, including the same industrial uses that FG will undertake after it completes construction. R. Vol. 14, p. 3433. In fact, the St. James Parish Council unanimously approved the proposed facility at this site. Second Supplement to Record, Vol. 1, pp. 8886-8890.

Operational units will be constructed 300 feet or more from the property boundary, and FG will plant trees within this buffer zone. R. Vol. 14, p. 3433. FG will also perform air monitoring along much of the property boundary. R. Vol. 34, pp. 8455-8456.

LDEQ found that the proposed project's air emissions will comply with the Clean Air Act and Louisiana's ambient air standards, all of which are designed to be protective of human health (including sensitive populations) and the environment. R. Vol. 34, p. 8448-8456. Further, because all water used for industrial purposes will be obtained from the Mississippi River, the project will not involve the use of any groundwater. R. Vol. 34, p. 8462. With respect to wetlands, only about 61.7 acres will be permanently impacted, the majority of which are low-quality, newly-vegetated areas near pre-existing borrow pits at the site. R. Vol. 35, p. 8465. FG has already arranged for approved mitigation bank purchases of land (of higher ecological quality value) to compensate for that acreage. *Id.* No adverse noise impacts are expected, and FG is working with state and local governmental authorities to address any potential issues from increased road traffic. R. Vol. 35, pp. 8466-8467. Finally, neither cultural resources nor endangered species will be adversely impacted. R. Vol. 35, pp. 8467-8468.

## **B. Purpose and Needs**

The global and domestic demand for plastic products is increasing every year, and that increase is expected to continue into the near future. Second Supplement to Record, Vol. 1, p. 8859. An anticipated gap in supply requires the building of new production facilities. *Id.*

In June of 2017, FG and the State of Louisiana entered into a cooperative endeavor agreement with respect to the proposed facility. R. Vol. 14, p. 3480. In that agreement, the State represented that it had obtained an economic impact analysis establishing that the project would result in a positive return on the State's investment regarding tax revenues and other economic

development benefits. R. Vol. 14, p. 3487. The agreement detailed certain jobs, payroll, and capital investment requirements to be satisfied by FG. R. Vol. 14, pp. 3490-91.

In addition, a thorough economic analysis of the proposed project was conducted by Dr. James A. Richardson, LSU Alumni Professor of Economics and Public Administration, and submitted by FG to LDEQ in support of the permit applications. R. Vol. 15, p. 3590. As stated by Dr. Richardson, “[t]he capital expenditures and the ongoing operations will provide a substantial lift to the St. James economy and will also positively affect the entire Louisiana economy. This economic lift will affect overall business transactions, earnings, employment, and state and local tax receipts for St. James Parish, surrounding parishes, and the state of Louisiana.” R. Vol. 15, p. 3598. During the construction phase, FG will spend approximately \$3.76 billion and employ (directly and indirectly) more than 8,000 workers in Louisiana. R. Vol. 15, pp. 3598-3599. During operations, FG will continue to invest up to \$500 million annually and will directly employ more than 1,200 people with a payroll of \$121 million. R. Vol. 15, p. 3601. State and local governments will average approximately \$40 million per year in new tax receipts during the construction phase, with \$10 million per year of that amount going to St. James and its surrounding parishes. R. Vol. 15, p. 3600. That amount does not include ad valorem taxes on the property being developed in St. James Parish. *Id.*

## **II. Application for and Issuance of the Challenged Permits**

### **A. Application Process**

FG submitted applications to LDEQ for fifteen total permits—one Prevention of Significant Deterioration (PSD) permit, and fourteen Title V permits (one for each plant). A list of the individual permits sought and the record citations for the updated permit applications and permits ultimately granted is included as Appendix A to the present brief.

FG submitted multiple analyses in support of the permit applications, including:

- an Air Quality Analysis detailing the results of the LDEQ-approved air modeling methodology to determine whether the proposed plant’s air emissions would cause or contribute to an exceedance of the National Ambient Air Quality Standards (NAAQS), the PSD increment levels, and/or the LDEQ ambient air standards (R. Vol. 12, p. 3004);
- an Environmental Assessment Statement addressing the relevant factors under the Louisiana Constitution’s public trust doctrine (R. Vol. 14, p. 3429);
- a conceptual mitigation plan regarding wetlands (R. Vol. 14, p. 3515);

- a threatened and endangered species assessment (R. Vol. 14, p. 3530);
- an intensive archaeological survey of the property (R. Vol. 14, p. 3565);
- a noise monitoring report (R. Vol. 14, p. 3575); and
- the economic analysis of the proposed facility by Dr. Richardson discussed above (R. Vol. 14, p. 3590).

On May 28, 2019, LDEQ issued public notice on the applications. R. Vol. 20, p. 4996 through R. Vol. 24, p. 5942. *See also* R. Vol. 24, p. 5949 (hearing package). In the hearing notice, LDEQ extended the deadline for public comments until August 12, 2019. R. Vol. 24, p. 5943. However, LDEQ considered additional comments filed by Petitioners and others even after that deadline. *See* EDMS 11841221 (Petitioners' August 28, 2019 comments); R. Vol. 30, pp. 7433-7443 (Petitioners' November 17, 2019 comments).

On January 6, 2020, after considering the roughly 7,500-page administrative record, LDEQ granted the requested permits. *See* Appendix A for record citations relating to each permit.

#### **B. Issuance of Permits, Basis for Decision, and Responses to Public Comments**

In support of the granting of the permits, LDEQ also issued a 43-page Basis for Decision (BFD) explaining its rationale, along with a 139-page Public Comment Response Summary in which the agency responded to pertinent statements and comments received via mail, email, and at the public hearing. R. Vol. 34, pp. 8437-8479 (BFD); Vols. 34, p. 8480 through Vol. 35, p. 8618 (Public Comment Response Summary).

In its BFD, LDEQ began by summarizing its findings regarding the "IT Questions" required to be considered under the Louisiana Supreme Court's seminal decision in *Save Ourselves, Inc. v. Louisiana Env'tl. Control Comm.*, 452 So. 2d 1152, 1159 (La. 1984), which interpreted the public trust doctrine set forth in Article IX, Section 1 of the Louisiana Constitution. Specifically, LDEQ found that:

- "adverse environmental impacts have been minimized or avoided to the maximum extent possible" because "FG has complied with all applicable federal and state statutes and regulations and has otherwise minimized or avoided environmental impacts to the maximum extent possible";
- "FG LA has met the alternative sites, alternative projects, and mitigating measures requirements of *Save Ourselves*"; and



- the “social and economic benefits of the proposed project will greatly outweigh its adverse environmental impacts.”

R. Vol. 34, p. 8437. Having made the required findings, LDEQ went on to specifically delineate the details of its reasoning as to each of the required factors.

### 1. Alternative Sites

With respect to alternative sites, LDEQ described at length the facility selection process. Initially, FG identified a number of suitable properties, each of which was considered in conjunction with the following environmental and logistical factors: (1) attainment status with respect to criteria pollutants; (2) access to an adequate dock (or ability to construct one); (3) rail access; (4) access to ethylene, ethane, and natural gas pipelines; (5) access to 230-kilovolt transmission lines; (6) amount of jurisdictional wetlands on the property; (7); amount and location of the land within the 100-year floodplain; (8) proximity of the property to residences; and (9) availability of at least 800 acres. R. Vol. 34, p. 8442. Six properties were initially identified, and the Zeringue/St. Emma site was chosen. *Id.* However, that site was thereafter eliminated because the New Orleans-Baton Rouge Steamship Pilots Association would not grant its approval because a dock constructed at the proposed location would make negotiating a bend in the river unacceptably dangerous. *Id.*

Eight additional sites were thereafter identified and considered along with the five remaining properties from the initial effort, for a total of thirteen properties located in three parishes (Ascension, St. James, and St. John the Baptist). R. Vol. 34, p. 8443. The five Ascension Parish properties were eliminated because the attainment status of that parish would have effectively precluded construction of the facility there given the requirement to offset certain emissions. *Id.* The remaining properties were analyzed using a scoring system that encompassed several criteria. Several were less positive because of the proximity of residential areas and/or the size/configuration of the property. *Id.* Two properties had more positive characteristics and few negative ones. Those properties were combined into the Mosaic-Gavilon site, which was ultimately selected by FG because it: (1) is located in an attainment area with respect to all National Ambient Air Quality Standards; (2) provides riverfront access for construction of a dock that will not obstruct navigation; (3) is traversed by a railroad track, 230-volt transmission lines, and ethane and natural gas pipelines; (4) contains a minimal amount of jurisdictional wetlands in the construction area; (5) is mostly located outside of the 100-year floodplain; (6) is sufficiently far

from the nearest residential communities and in an area of low population density; (7) is large enough to allow for a 300-foot buffer between process equipment and the property boundary; and (8) is located in an area specifically designated for industrial development and adjacent to other industrial properties. R. Vol. 34, p. 8444. LDEQ further noted that the low levels of contamination at the site (due to prior agricultural and oil and gas production activities) do not pose a risk to human health and the environment. *Id.* Based on all of these factors, LDEQ found that “there are no alternative sites that would offer more protection to the environment than the proposed site without unduly curtailing environmental benefits.” *Id.*

## **2. Alternative Projects**

With respect to alternative projects, LDEQ found that “the project as proposed offers more protection to the environment than any other possible alternative without unduly curtailing non-environmental benefits.” *Id.* In particular, the agency found that the proposed facility will: (1) “use state-of-the-art technology”; (2) “be constructed to meet the latest, and therefore most protective, technological standards”; and (3) “employ advanced emissions abatement technology and monitoring equipment to ensure emissions are compliant with permitted limits.” *Id.* LDEQ further noted that, because the proposed facility will utilize ethane (derived from natural gas) rather than naphtha (derived from crude oil) in its production processes, greenhouse gas emissions will be reduced in comparison to the traditional naphtha-based processes. R. Vol. 34, p. 8445. Finally, LDEQ considered but discounted the “no build” and “reduced build” alternatives given its conclusion that the proposed facility has minimized adverse environmental impacts to the maximum extent possible and that the social and economic benefits of the project outweigh such impacts. *Id.*

## **3. Mitigating Measures/Emission Limits**

With respect to mitigating measures, LDEQ explained that the Part 70 operating permits require FG to “meet or exceed” all applicable federal and state emission standards. *Id.* Next, LDEQ emphasized the extensive array of standards and requirements that will apply to the proposed facility, stating:

The FG LA Complex will be subject to a host of comprehensive emission standards and performance testing, monitoring, recordkeeping, and reporting requirements that cover every facet of operation, from receipt of raw materials to the shipment of finished products, including steam and power generation and wastewater treatment. In fact, no less than 23 federal standards . . . will apply to the facility.



*Id.* These provisions mandate that hazardous air pollutants be controlled by maximum achievable control technology (MACT) and that emissions of other pollutants, including greenhouse gases, be controlled by best available control technology (BACT). R. Vol. 34, pp. 8446-8447. In addition, LDEQ imposed a multitude of additional testing and monitoring requirements to ensure compliance with permit conditions. R. Vol. 34, pp. 8447-8448 (listing examples of such additional requirements).

**a. NAAQS (Criteria Pollutants) and AAS (Toxic Air Pollutants)**

LDEQ expended considerable effort addressing the proposed facility's compliance with the applicable emission limits. First, LDEQ addressed compliance with: (1) the Clean Air Act's National Ambient Air Quality Standards (NAAQS) and ambient air increments, which cover "pollutants considered harmful to public health and the environment," and (2) Louisiana's risk-based ambient standards (AAS), which cover toxic air pollutants. R. Vol. 34, p. 8448. As LDEQ noted, "[a]ccording to EPA, air quality that adheres to the NAAQS is protective of public health, animals, soils, and vegetation with 'adequate margins of safety.'"<sup>1</sup> *Id.* Further, "[s]tandards such as the NAAQS and AAS contemplate multiple sources of pollution and establish protective limits on cumulative emissions that should ordinarily prevent adverse air quality impacts." *Id.* With respect to the proposed facility's compliance with these crucial standards, LDEQ made its ultimate finding abundantly clear, stating:

[a]s shown in the tables below, LDEQ found that emissions from the FG LA Complex will not cause or contribute to a violation of a NAAQS or AAS using AERMOD, EPA's "preferred/recommended" dispersion model. Therefore, **the permits do not allow for air quality impacts that could adversely affect human health or the environment.**

*Id.* (emphasis added).

In arriving at these findings, LDEQ "recognize[d] that maximum modeled concentrations of NO<sub>2</sub> and PM<sub>2.5</sub> exceed their respective 1-hour and 24-hour NAAQS (and the 24-hour PM<sub>2.5</sub> ambient air increment)." R. Vol. 34, p. 8482. However, because refined air modeling established that FG's maximum contribution to each of these modeled exceedances will be below the relevant Significant Impact Level (SIL) recommended by EPA and applied (for decades) by LDEQ, "FG LA will not 'cause or contribute' to a violation of the 24-hour PM<sub>2.5</sub> NAAQS, the 1-hour NO<sub>2</sub>

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<sup>1</sup> Primary standards are limits designed to protect public health, including sensitive populations such as asthmatics, children, and the elderly. R. Vol. 34, p. 8448. Secondary standards are designed to protect public welfare, including protection from decreased visibility and damage to animals, crops, vegetation, and buildings. R. Vol. 34, p. 8448.



NAAQS, or the 24-hour PM<sub>2.5</sub> ambient air increment.”<sup>2</sup> R. Vol. 34, p. 8483. LDEQ further noted that: (1) though “maximum modeled concentrations of NO<sub>2</sub> and PM<sub>2.5</sub> exceed their respective . . . NAAQS[,] . . . this does not necessarily mean that there are or will be **actual** exceedances of these standards” because “the results effectively assume worst-case emissions from multiple industrial facilities will coincide with worst-case meteorological conditions, a circumstance that is improbable at best and, given the number of sources modeled, likely never to occur.” *Id.* (emphasis added). *See also* R. Vol. 34, p. 8450. Further, the only receptors within five miles of the complex that could be affected by the exceedances (were they actually to exist) are located on industrial properties rather than “residential property, property that is generally accessible to the public, or any other location where long-term exposure to emissions could be reasonably anticipated.” R. Vol. 34, pp. 8452, 8483. Thus, LDEQ emphasized that “the health of those living in the vicinity of the FG LA Complex will not be adversely impacted.” R. Vol. 34, p. 8452.

#### b. Ethylene Oxide

LDEQ next addressed ethylene oxide emissions. The agency explained that though EPA suggests the concentration of ethylene oxide associated with a 1-in-10,000 cancer risk for a lifetime exposure is 0.02 µg/m<sup>3</sup>, “recently published data from the Louisiana Tumor Registry does not support EPA’s supposition.” R. Vol. 34, p. 8453. In particular, “there is no evidence that cancer rates in these census tracts [where the largest ethylene oxide emitters are located] are elevated as a consequence of exposure to [ethylene oxide] emissions. In fact, the average rates for all cancers combined and for breast cancer in these areas are *below* state averages.” *Id.* LDEQ also noted that research by others, including the Texas Commission on Environmental Quality (TCEQ), has demonstrated that EPA’s risk assessment for ethylene oxide “significantly over-predicts the number of cancers that were observed in [the study] used to derive the 0.02 µg/m<sup>3</sup> value.” R. Vol. 34, p. 8454. Thus, TCEQ recommended the use of a 7 µg/m<sup>3</sup> value instead. *Id.* LDEQ did not adopt the TCEQ standard, but instead noted that “the residential areas to the east and northeast of the FG LA Complex, including St. Louis Academy and Mt. Cavalry Baptist Church, are well beyond the 0.02 µg/m<sup>3</sup> isopleth (red line). Thus, **even if one were to conservatively employ 0.02 µg/m<sup>3</sup> as a**

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<sup>2</sup> LDEQ exhaustively discussed and provided its rationale for the use of SILs in its responses to public comments. R. Vol. 34, pp. 8481-8483 (Response to Public Comment No. 1).

**protective standard, these areas will not be adversely impacted.”**<sup>3</sup> *Id.* (emphasis added). In addition, LDEQ noted that the ethylene oxide-related plants at the proposed facility “will be subject to one of the most stringent federal leak protection and repair programs promulgated to date,” and “LDEQ has established more stringent requirements for components in [ethylene oxide] service. *Id.* Finally, “FG LA must continuously monitor ambient concentrations of [ethylene oxide]” along its eastern property line and a portion of its northeastern property line. R. Vol. 34, pp. 8455-8456.

**c. Greenhouse Gases**

The last issue relevant to the present action<sup>4</sup> addressed by LDEQ in the context of mitigating measures was greenhouse gases.<sup>5</sup> Earlier in the BFD, LDEQ had quantified the amount of permitted annual greenhouse gas emissions at 13,628,091 tons. R. Vol. 34, p. 8441. In its discussion of those greenhouse gas emissions in the context of mitigating measures, LDEQ first noted that the permits require best available control technology, and FG “must minimize such emissions by employing design features which maximize efficiency . . . where available.” R. Vol. 34, p. 8457. Second, the agency found that “there is no current methodology or guidance to determine how a specific industrial facility’s incremental contribution of [greenhouse gases] would translate into physical effects on the global environment,” citing EPA’s own statement that “[q]uantifying the[] exact impacts attributable to the specific [greenhouse gas] source obtaining a

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<sup>3</sup> LDEQ also addressed ethylene oxide emissions in its responses to public comments. *See* R. Vol. 34, pp. 8530-8532; Vol. 35, pp. 8533-8534, 8546-8547, 8587, 8601 (reliance on Louisiana Tumor Registry data), 8605.

<sup>4</sup> In the mitigating measures section, LDEQ also addressed impacts to “Class 1 Areas,” national parks and other areas of special national and cultural significance where more stringent visibility and air quality related values (AQRV) apply, finding that FG’s analysis demonstrates that the proposed project would not cause or contribute to the exceedance of any Class 1 PSD increment, cause an unacceptable degradation of any applicable AQRV, cause visibility issues, or deposit unacceptable quantities of sulfates and nitrates. R. Vol. 34, pp. 8456-8457. The agency also noted the forested buffer that FG will provide along its eastern boundary to mitigate the visual impacts on residential areas. R. Vol. 34, p. 8458.

<sup>5</sup> LDEQ also addressed the issue of greenhouse gases in its responses to public comments. There, LDEQ specifically rejected the commenters’ suggestion that the “social cost of carbon” protocol should be utilized in the performance of the agency’s “public trust” duty, stating that:

LDEQ is not required to consider the social cost of carbon. When assessing the economic impact of available and technically feasible control options in a BACT analysis, LDEQ generally calculates cost effectiveness in terms of dollars per ton of pollutant *removed* from the atmosphere. Neither federal nor state regulations require LDEQ to consider the estimated (and highly speculative) adverse economic impacts of pollutants *not* removed from the atmosphere in the decision making process. Applying the social cost of carbon as suggested by the commenter would lead to absurd results, effectively precluding *any* new industrial development. For example, using the commenter’s data, a basic natural gas—fired 75,100 Btu/hour home hot water heater could have a “social cost” as high as \$4318 per year.

R. Vol. 35, pp. 8534-8535 (LDEQ Response to Comment 72).



permit in specific places is not currently possible with climate change modeling.” R. Vol. 34, pp. 8457-8458. Third, the agency noted that “exposure to [greenhouse gas] emissions does not adversely affect human health.” R. Vol. 34, p. 8458. Fourth, LDEQ found that because of “global mixing” of greenhouse gas emissions, “[c]onstruction of the FG LA Complex in St. James Parish will, in effect, have no more impact on Louisiana relative to [greenhouse gases] than if the facility was constructed elsewhere.” *Id.* And, finally, the agency found that because the proposed facility will employ state-of-the-art technology, greenhouse gas emissions may actually decrease to the extent the proposed facility displaces existing production elsewhere in the world that utilizes technology producing more greenhouse gases. *Id.*

Considering all of these issues (and others not relevant to the present action), LDEQ concluded that “there are no mitigating measures that would offer more protection to the environment than the facility as proposed without unduly curtailing non-environmental benefits.” *Id.*

#### **4. Avoidance of Adverse Environmental Effects**

In this section, LDEQ assessed “the potential and real adverse environmental impacts of pollutant emissions” to ensure that they “are minimized to the maximum extent possible.” R. Vol. 34, p. 8459. After incorporating by reference the air emissions analysis discussed above, the agency reviewed at length nine different media (wastewater, groundwater, waste, process safety, wetlands, traffic, noise, cultural resources, and endangered species) to address whether, with respect to each, the potential and real adverse environmental impacts have been avoided. R. Vol. 34, pp. 8459-8469. Following its assessment (which is described at length below at pages 56-60), LDEQ “determine[d] that FG LA has avoided, to the maximum extent possible, adverse environmental impacts without unduly curtailing non-environmental benefits.” R. Vol. 34, p. 8469.

#### **5. Cost/Benefit Analysis (Balancing)**

Next, LDEQ performed the required cost/benefit balancing, concluding that “[t]he social and economic benefits of the proposed project will outweigh its potential adverse environmental impacts.” R. Vol. 34, p. 8469.

With respect to the potential environmental impacts, the agency incorporated by reference its prior discussion on “impacts to air quality and other media,” reiterating that “[t]hese impacts have been avoided to the maximum extent possible without unduly curtailing non-environmental benefits.” *Id.*



LDEQ then discussed at length the social and economic benefits of the proposed project.

R. Vol. 34, pp. 8469-8471. These included:

- FG's establishment of the FG Workforce Academy (in conjunction with the River Parishes Community College, local workforce development officials, and others) to provide training and skills required to gain employment at the facility to residents living in Districts 5, 6, and 7; all St. James residents who successfully complete the training program are guaranteed an interview for open job positions at the Facility;
- FG's commitment to cooperate with state and local governments to develop an alternative access route between Highway 18 (River Road) and Highway 3127 and to work with the State on widening improvements to Highway 3127;
- FG's work, in 2019, with St. James Hospital to provide free health screenings for District 5 residents;
- FG's commitment to cooperate with St. James Parish to seek out and support beautification projects in District 5;
- FG's funding of an educational grant for St. James Parish west bank students;
- The proposed project's creation of approximately 1,200 permanent jobs with an average salary of \$84,500 per year, plus benefits;
- The proposed project's creation of over 8,000 temporary construction-related jobs at peak, more than half of which will be in St. James Parish and the surrounding area;
- Significant direct economic benefits including \$9.4 billion in capital expenditures (\$3.76 billion of which will be spent in Louisiana), \$300-\$500 million in operations revenue per year, and a significant boost in federal/state/local tax payments;
- A \$2.5 billion growth in personal earnings, over half of which will occur in St. James Parish and the surrounding area;
- Spending by FG of approximately \$300 million per year to operate the facility, which will create or support around 3,950 jobs, the vast majority of which will be realized in St. James Parish and the surrounding area; and
- Property taxes to be paid once the ten-year industrial tax exemption expires.

LDEQ concluded its analysis by "find[ing] that the social and economic benefits outweigh the environmental impact costs." R. Vol. 34, p. 8471.

## 6. Environmental Justice

In addition to providing the above analysis regarding the public trust doctrine of Article IX, Section 1 of the Louisiana Constitution, LDEQ undertook an analysis of the environmental justice implications of the proposed project. R. Vol. 34, pp. 8471-8478. The agency began by addressing how EPA has handled environmental justice over the years, beginning with the principle that to be actionable under Title VI, an impact must be both “adverse” and “disparate.” R. Vol. 34, p. 8473. Thus, where there is no adverse impact for anyone living near the facility, “it is unnecessary to reach the question of whether the impacts are ‘disparate.’” *Id.*

With respect to the question of “adverse” impacts, LDEQ noted that in the past, EPA applied a “rebuttable presumption” that air quality meeting the NAAQS is protective of human health. R. Vol. 34, p. 8472. Presently, though such a rebuttable presumption no longer applies, the environmental justice analysis remains “intrinsically linked to whether a given area is compliant with the NAAQS.” R. Vol. 34, p. 8474. Thus, “EPA will determine if a health-based NAAQS is likely not being met at the location in question” due, at least in part, to the permitted facility. R. Vol. 34, p. 8475.

Next, LDEQ addressed EPA’s environmental justice mapping and screening tool, EJSCREEN. The agency noted that EPA cautioned that EJSCREEN is a screening-level tool only that should not be used, among other things, “to quantify specific risk values for a selected area,” “to measure cumulative impacts of multiple environmental factors,” or “as a basis for agency decision-making or making a determination regarding the existence or absence of EJ concerns.” *Id.* Considering the EJSCREEN data in its original BFD, LDEQ found that the EJSCREEN data “shows that residents of the community closest to the FG LA Complex do *not* bear a disproportionate share of the negative environmental consequences resulting from industrial operations. In fact, the environmental indicators of Particulate Matter, Ozone, NATA Air Toxics Cancer Risk, and NATA Respiratory Hazard Index are comparable with or *less* than state averages.” R. Vol. 34, p. 8475. The agency further “evaluated whether the net effect of individual permitting decisions has, over time, increased the burden on the residents of St. James Parish,” finding “dramatic declines in [Toxic Release Inventory emissions, criteria pollutants, and TAPs] over both timeframes evaluated.” R. Vol. 34, pp. 8476-8477. The agency also found a decrease of emissions from all major sources within five miles of the proposed complex in the amount of



33,000 tons since 2015. R. Vol. 34, p. 8477. Concluding its original environmental justice analysis,

LDEQ stated:

As noted in Section VI, the analyses conducted in support of the proposed permits show that FG LA will meet the primary and secondary NAAQS and the Louisiana AAS for TAPs and that there are no “hot spots” over non-industrial properties which are in violation of these standards. EPA’s own EJSCREEN data shows that the environmental indicators of Particulate Matter, Ozone, NATA Air Toxics Cancer Risk, and NATA Respiratory Hazard Index are comparable or less than state averages. Actual emissions of both criteria pollutants and TAPs as well as TRI releases have decreased dramatically over time. Permitted emissions from major sources located near the FG LA Complex have also declined significantly.

Finally, it is clear that LDEQ provided an opportunity for all parties to be meaningfully involved in the permit process. For example, LDEQ provided a lengthy comment period (2.5 times longer than required by applicable regulations) and a public hearing on the proposed permits, and as evidenced by the Public Comment Response Summary, LDEQ has carefully considered the community’s concerns in the decision making process.

R. Vol. 34, pp. 8477-8478. *See also* R. Vol. 35, pp. 8542-8546 (public comment responses addressing environmental justice).

After this Court ordered a remand for LDEQ to consider updated EJSCREEN data, LDEQ addressed the fact that “based on the results of the 2014 National Air Toxics Assessment (NATA), the NATA Cancer risk for the area . . . increase[d].” R. Vol. 34, p. 8963. Specifically, the agency found that “[w]hile this value did increase relative to the state average, this change does not represent a statistically significant increase in the overall cancer risk to those living in the vicinity of the FG LA Complex.” *Id.* It further noted that the NATA Cancer Risk value “overestimates actual cancer risk” because: (1) EPA’s assumed exposure scenario does not reflect real world conditions in that it assumes continuous 24-hour per day exposure for seventy years; and (2) reported emissions for chloroprene and ethylene oxide, the compounds contributing to most of the risk, have “declined significantly since 2014.” R. Vol. 34 p. 8964. Thus, LDEQ concluded that:

the 2014 NATA data does not materially change the results of the impact of the FG LA Complex on human health and the environment. The NATA Cancer Risk value is based on a dated emissions inventory which fails to account for the recent and substantial reductions in emissions of the compounds which EPA asserts contribute “to most of the risk” and grossly overestimates public exposure to all carcinogenic pollutants.

For these reasons, LDEQ reaffirms that the social and economic benefits of the proposed project will greatly outweigh its adverse environmental benefits.

R. Vol. 34, p. 8965. Consistent with EPA’s Title VI policy discussed above, LDEQ did not have to consider the issue of “disparate” impact given its finding that no one in the vicinity of the proposed facility would suffer any adverse health impact.



## LAW AND AUTHORITIES

### I. Standard of Review

Pursuant to Louisiana Revised Statutes 30:2050.21, the judicial review provisions of the Louisiana Administrative Procedure Act (LAPA) govern in actions for judicial review of LDEQ permitting decisions. La. R.S. 30:2050.21; *Save Our Hills v. Louisiana Dept. of Env. Quality*, 2018-CA-0100 (La. App. 1st Cir. 10/5/18), 266 So. 3d 916, 926-27. Judicial review is conducted by the court and is confined to the administrative record. La. R.S. 49:964(F); *Save Our Hills*, 266 So. 3d at 927. In performing judicial review of a permitting decision under Section 30:2050.21, this Court functions as an appellate court. *Save Our Hills*, 266 So. 3d at 927.

Pursuant to Section 49:964(G) of the LAPA, the Court may affirm the decision of the agency or remand the case for further proceedings. La. R.S. 49:964(G). The court may reverse or modify an agency 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 and capricious or characterized by abuse of discretion or clearly unwarranted exercise of discretion; or (6) not supported or sustainable by a preponderance of the evidence as determined by the reviewing court. *Id. See also Save Our Hills*, 266 So. 3d at 927. Thus, under LSA-R.S. 49:964(G)(5), the appellate court uses the arbitrary and capricious test to review the agency's conclusions and exercises of discretion. *Save Ourselves, Inc.*, 452 So. 2d at 1159; *Avoca, Inc. v. State, Dep't of Nat. Res.*, 2016-CA-1677, 2017 La. App. Unpub. LEXIS 266, at \*7-9 (La. App. 1st Cir. 9/15/17).

With respect to the constitutional public trust doctrine, a court should not review a substantive decision of LDEQ on its merits unless it can be shown that the actual balance of costs and benefits that was struck by the agency was arbitrary or clearly gave insufficient weight to environmental protection. *Save Ourselves*, 452 So. 2d at 1159; *Save Our Hills*, 266 So. 3d at 927. This is because “the constitution does not establish environmental protection as an exclusive goal, but requires a balancing process in which environmental costs and benefits must be given full and careful consideration along with economic, social, and other factors.” *Save Ourselves*, 452 So. 2d at 1157. Environmental costs in some cases may outweigh economic and social benefits, while in other cases they may not. *Save Our Hills*, 266 So. 3d at 932. As stated by the Louisiana Supreme Court:

The environmental protection framework vests in the [LDEQ] a **latitude of discretion** to determine the substantive results in each particular case. Environmental amenities will often be in conflict with economic and social considerations. To consider the former along with the latter must involve a balancing process. In some instances environmental costs may outweigh economic and social benefits and in other instances they may not. This leaves room for a responsible exercise of discretion and may not require particular substantive results in particular problematic instances.

*Save Ourselves*, 452 So. 2d at 1157 (emphasis added). Further,

In light of the structure and aims of the public trust doctrine and the environmental act, and the breadth of authority delegated to the [LDEQ], the judicial review function encounters significant limitations in the substantive aspects where the given statutory standards are "arbitrary", "capricious" or "abuse of discretion". **It is elementary that a court's function is not to weigh de novo the available evidence and to substitute its judgment for that of the agency.**

*Id.* at 1159 (emphasis added).<sup>6</sup>

The test for determining whether an agency action was arbitrary and capricious is whether that action taken was "without reason." *Save Our Hills*, 266 So. 3d at 927. Echoing the language of the supreme court in *Save Ourselves*, the first circuit has emphasized that this test poses a "significant limitation" on judicial review. *Id.* at 934. As explained recently by that court:

If the evidence as reasonably interpreted supports the determination of the administrative agency, its orders will be accorded great weight and will not be reversed or modified in the absence of a clear showing that the administrative action is arbitrary and capricious. The test for determining whether the action is arbitrary and capricious is whether "the action taken is reasonable under the circumstances." Stated differently, the question is whether the action taken was "without reason."

*Id.*

Thus, so long as the agency's decision was reached procedurally with individualized consideration and balancing of environmental factors conducted fairly and in good faith, that decision is not subject to reversal as a substantive matter unless it was made "without reason." *Id.* at 927.

## **II. Issuance of the PSD permit does not violate the Clean Air Act.**

Petitioners claim that the PSD permit issued by LDEQ should be vacated because FG failed to demonstrate that its PM<sub>2.5</sub> and NO<sub>2</sub> emissions would not "cause or contribute" to violations of the NAAQS or PSD increments set for those "criteria" pollutants under the Clean Air Act. Petitioners' Original Brief, pp. 19-28. With respect to that issue, LDEQ found that "emissions from the FG LA

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<sup>6</sup> Given this standard, Intervenor Alexander is misleading in her merits brief with respect to her statement that "the Court owes no deference to LDEQ [with respect to the exercise of its public trust duty], for courts retain their 'traditional primacy in interpreting constitutional and statutory provisions and enforcing procedural rectitude.'" Alexander's Original Brief, p. 2. The agency's *substantive* decision on the weighing and balancing of the relevant costs and benefits is, indeed, subject to deference and may be reversed only if it is found to be arbitrary and capricious.



Complex will not cause or contribute to a violation of a NAAQS or AAS using AERMOD, EPA's "preferred/recommended" dispersion model. Therefore, the permits do not allow for air quality impacts that could adversely affect human health or the environment." R. Vol. 34, p. 8448. *See also* R. Vol. 34, p. 8483 ("FG LA will not 'cause or contribute' to a violation of the 24-hour PM<sub>2.5</sub> NAAQS, the 1-hour NO<sub>2</sub> NAAQS, or the 24-hour PM<sub>2.5</sub> ambient air increment.") In arriving at these findings, LDEQ "recognizes that maximum modeled concentrations of NO<sub>2</sub> and PM<sub>2.5</sub> exceed their respective 1-hour and 24-hour NAAQS (and the 24-hour PM<sub>2.5</sub> ambient air increment)." R. Vol. 34, p. 8482. However, because refined air modeling established that FG's maximum contribution to each of these modeled exceedances will be below the relevant Significant Impact Level (SIL) recommended by EPA and applied (for decades) by LDEQ, "FG LA will not 'cause or contribute' to a violation of the 24-hour PM<sub>2.5</sub> NAAQS, the 1-hour NO<sub>2</sub> NAAQS, or the 24-hour PM<sub>2.5</sub> ambient air increment." R. Vol. 34, p. 8483.

LDEQ further noted that: (1) though "maximum modeled concentrations of NO<sub>2</sub> and PM<sub>2.5</sub> exceed their respective . . . NAAQS[,] . . . this does not necessarily mean that there are or will be **actual** exceedances of these standards" because "the results effectively assume worst-case emissions from multiple industrial facilities will coincide with worst-case meteorological conditions, a circumstance that is improbable at best and, given the number of sources modeled, likely never to occur." *Id.* (emphasis added). *See also* R. Vol. 34, p. 8450. Further, the only receptors within five miles of the complex that could be affected by the exceedances (if they actually existed) are located on industrial properties rather than "residential property, property that is generally accessible to the public, or any other location where long-term exposure to emissions could be reasonably anticipated." R. Vol. 34, p. 8452; R. Vol. 34, p. 8483. Thus, LDEQ emphasized that "the health of those living in the vicinity of the FG LA Complex will not be adversely impacted." R. Vol. 34, p. 8452 (emphasis added). Contrary to Petitioners' argument, LDEQ's findings are entirely correct.

#### **A. The Clean Air Act**

The CAA establishes NAAQS, which are concentration levels of pollutants in ambient air "the attainment and maintenance of which" are "requisite to protect the public health" with "an adequate margin of safety." 42 U.S.C. § 7409(b)(1); *see also*, 40 CFR § 50.2(b) (NAAQS "define levels of air quality which the Administrator judges are necessary, with an adequate margin of safety,



to protect the public health.”) EPA has established NAAQS for various pollutants (called “criteria pollutants”).

St. James Parish is in “attainment” status, which means that the NAAQS are not exceeded within the parish and have thus been “attained.” As a result, the rules relating to the Prevention of Significant Deterioration (PSD) apply. *See* 42 U.S.C. § 7470, *et seq.* Under the CAA, a state’s implementation plan (*i.e.*, the state’s air quality program) must contain measures as may be necessary to prevent “significant deterioration” of air quality in each region designated as attainment. 42 U.S.C. § 7471. Under the CAA and LDEQ’s regulations (*i.e.*, the state’s implementation plan), the proposed facility must demonstrate that “emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of any” NAAQS or increment (that is, the “maximum allowable increase over the baseline concentration.”). 42 U.S.C. § 7475(a)(3); *see also* LAC 33:III.509.K.1.

**B. FG performed extensive air modeling.**

A permit application must contain “an analysis of ambient air.” LAC 33:III.509.M.1.a. The analysis or estimate “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.

To demonstrate that FG’s proposed facility will not “cause or contribute” to any NAAQS exceedance, FG conducted a robust, thorough, and detailed air quality modeling effort that was in complete conformity with applicable regulations as well as established EPA and LDEQ modeling policy. Indeed, LDEQ was involved from the beginning of the effort, reviewing the modeling protocol, reviewing and questioning the reports, and even requiring additional modeling. Specifically, FG submitted its Modeling Protocol, which conformed to LDEQ’s Air Quality Modeling Procedures and EPA’s regulation at 40 CFR Part 51, Appendix W, cited above. R. Vol. 9, pp. 2208-2238. LDEQ approved the protocol. R. Vol. 10, pp. 2349-2351. FG then performed the air emission modeling and submitted the resulting Air Quality Analysis Report (AQA Report) to LDEQ for review. R. Vol. 12, p. 3004 to R. Vol. 14, p. 3427. FG followed Appendix W in Part 51 to conduct the modeling. R. Vol. 13, p. 3041. As detailed in the AQA Report, FG performed a preliminary impact analysis, a full impact analysis, and detailed refined modeling.

In the preliminary impact analysis, FG performed modeling to determine the predicted maximum concentrations of pollutants from FG’s sources at off-site locations. *See* R. Vol. 13, pp.

3041–3042 (Section 11.1). These maximum predicted concentrations were compared to Significant Impact Levels (SILs). Some pollutants were less than the SILs, while others were above the SILs. For the pollutants above their respective SILs, FG conducted a full impact analysis. R. Vol. 13, pp. 3041–3042 (AQA Report, Section 11.2).

The full impact analysis is used to predict the ambient concentrations for comparison to the NAAQS. R. Vol. 13, p. 3031. In the full impact analysis, FG modeled its own emissions as well as emissions from off-property sources within the area. Thus, FG modeled cumulative emissions in the area, consisting of its own emissions and emissions from off-site sources in the area. Ambient background concentrations (from monitoring data) were added to the full impact modeling results. R. Vol. 13, pp. 3042–3046 (AQA Report, Section 11.2). Based on the full impact analysis of FG’s emissions and background concentrations, there were predicted exceedances of the NAAQS at off-site receptor locations for only two pollutants: NO<sub>2</sub> and PM<sub>2.5</sub>. R. Vol. 13, p. 3044 (AQA Report, Table 11-4).

To further analyze these two pollutants, FG then conducted detailed refined modeling in accordance with regulations and longstanding regulatory guidance to establish whether FG caused or contributed to any of the modeled exceedances. R. Vol. 13, pp. 3044-3045 and pp. 3400-3426 (AQA Report, Appendix U). The modeling analysis was done for all receptors that had a predicted exceedance of the NAAQS based upon the preliminary impact analysis. In each case, it was demonstrated that the predicted impacts from the emissions attributable to FG were below the respective SIL at each such receptor. *Id.* Thus, as the predicted concentration at each such receptor was less than a SIL, FG demonstrated that it will not cause or contribute to the modeled exceedance at each receptor.<sup>7</sup>

By way of example, the maximum modeled exceedance for NO<sub>2</sub> (1-Hour) was subjected to refined air modeling using AERMOD’s MAXDCONT tool. *Id.* The AQA Report shows that the total modeled NO<sub>2</sub> (1-Hour) concentration is 422.53 µg/m<sup>3</sup> (the sum of FG’s emissions, off-site emissions of 393.72 µg/m<sup>3</sup>, and background concentrations of 28.81 µg/m<sup>3</sup>). R. Vol. 13, p. 3044 (AQA Report, Table 11-4). However, the refined air modeling established that, of the 393.72 µg/m<sup>3</sup> modeled

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<sup>7</sup> FG conducted additional modeling as well. As to NO<sub>2</sub> (1-Hour), FG submitted the results in October 2018. R. Vol. 17, pp. 4214-4254. As to PM<sub>2.5</sub> (24-Hour Increment), FG submitted the results in January 2019. R. Vol. 19, pp. 4573-4730. As to both, FG demonstrated that it did not cause or contribute to the modeled exceedance. FG also conducted additional modeling related to ethylene oxide and ethylene glycol. The Updated Modeling Analysis For Ethylene Oxide and Ethylene Glycol was submitted in December 2018. R. Vol. 19, pp. 4533-4545.

concentration at that receptor, the amount attributable to FG at that receptor is a mere 0.0116  $\mu\text{g}/\text{m}^3$ . R. Vol. 14, p. 3422 (AQA Report, Appendix U, p. 21 of 25). Indeed, LDEQ found that FG's maximum contribution to any modeled exceedance at any location "will be 6.35  $\mu\text{g}/\text{m}^3$ , which is below the SIL of 7.5  $\mu\text{g}/\text{m}^3$ ." R. Vol. 34, p. 8449 n.40.

PM<sub>2.5</sub> emissions were also subjected to the same analysis as the 24-Hour PM<sub>2.5</sub> NAAQS and 24-Hour PM<sub>2.5</sub> increment standards. With respect to the 24-Hour PM<sub>2.5</sub> NAAQS, the maximum predicted concentration is 32.16  $\mu\text{g}/\text{m}^3$ . R. Vol. 19, p. 4578 (Table 3). However, air modeling established that, of the 32.16  $\mu\text{g}/\text{m}^3$  maximum modeled concentration at that receptor, the amount attributable to FG at that receptor is a mere 0.0518  $\mu\text{g}/\text{m}^3$  for the primary standard. R. Vol. 19, p. 4719 (Attachment D, p. 2 of 8). Indeed, LDEQ found that FG's maximum contribution to any modeled exceedance at any location "will be 0.89  $\mu\text{g}/\text{m}^3$ , which is below the SIL of 1.2  $\mu\text{g}/\text{m}^3$ ." R. Vol. 34, p. 8449 n.40.

With respect to the 24-Hour PM<sub>2.5</sub> increment, the maximum predicted concentration is 12.445  $\mu\text{g}/\text{m}^3$ . R. Vol. 19, p. 4579 (Table 4). However, air modeling established that, of the 12.445  $\mu\text{g}/\text{m}^3$  maximum modeled concentration at that receptor, the amount attributable to FG at that receptor is a mere 0.00163  $\mu\text{g}/\text{m}^3$  for the primary standard. R. Vol. 19 at p. 4727 (Attachment E, p. 1 of 2). FG's maximum contribution to any modeled exceedance at any location will be 0.6661  $\mu\text{g}/\text{m}^3$ . R. Vol. 19, pp. 4727-4928 (Attachment E).

In sum, the modeling results establish that FG's emissions will not "cause or contribute to" an exceedance of the NAAQS or increment at **any** off-site receptor. LDEQ approved the entire modeling effort. R. Vol. 34, pp. 8376-8382, pp. 8448-8452, and pp. 8481-8483.

**C. Petitioners' claims are without merit.**

Petitioners do not contest that the modeling effort conformed to the appropriate procedures, nor do they argue that LDEQ was incorrect in finding that all emissions besides PM<sub>2.5</sub> (24-Hour), NO<sub>2</sub> (1-Hour), and PM<sub>2.5</sub> (24-Hour Increment) do not exceed the relevant NAAQS or PSD increment. Finally, Petitioners do not argue that the emission values modeled by FG for PM<sub>2.5</sub> (24-Hour), NO<sub>2</sub> (1-Hour), and PM<sub>2.5</sub> (24-Hour Increment) are incorrect. Rather, Petitioners' sole claim is that the mere existence of the predicted modeled exceedances for PM<sub>2.5</sub> (24-Hour), NO<sub>2</sub> (1-



Hour), and PM<sub>2.5</sub> (24-Hour increment) constitute violations of the Clean Air Act.<sup>8</sup> This is incorrect for two reasons.

First, the existence of a predicted modeled exceedance is merely one of several steps in the modeling process. If an exceedance is predicted by the model, additional analysis is required. As set forth in LDEQ's Air Quality Modeling Procedures, cited in the AQA Report, once there is a predicted modeled exceedance, the applicant "must determine the proposed project's contribution to the potential exceedance." R. Vol. 13, p. 3044. As discussed in detail above, FG conducted that additional analysis and demonstrated that its contribution did not cause or contribute to any predicted modeled exceedance. In fact, the modeled exceedances are not caused by FG but "are caused by off property sources." R. Vol. 13, p. 3044.

Second, Petitioners apply an incorrect standard. The standard is not whether an exceedance has been modeled. Rather, the question under the CAA and LDEQ regulations is whether FG's emissions "cause or contribute" to any predicted modeled exceedances. *See* 42 U.S.C. § 7475(a)(3). *See also* LAC 33:III.509.K.1. Petitioners acknowledge this, stating that the "key issue" is whether FG will cause or contribute to a NAAQS violation. Petitioners' Original Brief, p. 20. Under this standard, the focus is not on the predicted modeled exceedance, but rather on the contribution of the proposed project to the predicted modeled exceedance.

Neither the Clean Air Act nor the LDEQ regulations defines the phrase "cause or contribute." Nevertheless, consistent with the requirement to prevent "significant deterioration" in attainment areas, EPA and LDEQ have long interpreted and applied the phrase to mean that a facility's emissions do not "cause or contribute" to a NAAQS exceedance if the facility's emissions at the location of a modeled exceedance are below significant impact levels, or SILs.

Petitioners claim that the use of SILs violates the CAA and LDEQ regulations. This is flatly incorrect because the CAA, EPA regulations, and LDEQ regulations all incorporate the concept of significance and provide for the use of SILs. Specifically, the CAA incorporates "significance" in multiple places and requires that state regulations include measures to prevent "significant" deterioration in attainment areas. Indeed, the relevant portion of the CAA is entitled "Prevention of *Significant* Deterioration of Air Quality." 42 U.S.C. § 7470 (emphasis added). Further, the CAA specifically directs and mandates that "each applicable implementation plan

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<sup>8</sup> Petitioners also argue that the modeled exceedances violate the public trust doctrine. That argument is addressed *infra* at p. 31.

shall contain emission limitations and such other measures as may be necessary . . . to prevent **significant** deterioration of air quality in each region . . . designated . . . as attainment.” 42 U.S.C. § 7471 (emphasis added). Finally, courts have recognized that the PSD part of the CAA, “by its title and by its terms, is designed to prevent **significant** deterioration in air quality.” *Alabama Power Company v. Costle*, 636 F.2d 323, 361 (D.C. Cir. 1979) (emphasis added). The legislative history related to the PSD Program confirms the intent to incorporate the concept of “significance.” See H.R. Rep. No. 95-294 (May 12, 1977), 1977 U.S.C.C.A.N. 1077, 1226 (1977 WL 16034) (“The decision as to how much air quality deterioration constitutes ‘significant deterioration’ is essentially a judgment which the State must be free to make after striking its own balance among the health, environmental and economic consequences of a proposed increase in air pollution.”) Thus, the CAA contemplates some measure of acceptable “air quality deterioration” below a level constituting “significant deterioration.” By the explicit wording of the CAA and the legislative history, significance and significance levels expressly comprise part of the PSD Program.

Further, the concepts of significance and SILs are specifically incorporated by regulation into the PSD Program. Pursuant to 40 CFR § 51.165(b)(2), a “major source . . . will be considered to cause or contribute to a violation of a national ambient air quality standard when such source or modification would, at a minimum, exceed the following **significance levels**” set out in the included table. Both PM<sub>2.5</sub> and NO<sub>2</sub> are included in the table. Thus, by regulation, EPA has determined that significance levels, or SILs, are an integral part of the demonstration as to whether a source will cause or contribute to a predicted modeled exceedance.

Petitioners suggest that this regulation addresses only situations when a contribution exceeds a significance level and does not encompass the converse—that is, when the SIL has not been exceeded. However, EPA and LDEQ are free to interpret the PSD Program to allow the use of SILs to demonstrate that a source does not cause or contribute to a predicted modeled exceedance when the SILs are not exceeded. Indeed, they have done so for decades.

As far back as in 1991, EPA stated that its “longstanding policy” is to allow the use of SILs “to determine whether a . . . source will cause or contribute to a violation of the [NAAQS] or PSD increments.” R. Vol. 19, p. 4736. LDEQ acknowledges this interpretation, stating that SILs have been used by EPA “in the PSD permitting process for many years.” R. Vol. 34, p. 8481. LDEQ has interpreted the phrase “cause or contribute” in a manner similar to EPA, stating that it “uses



the SIL values recommended by EPA in implementing its PSD program, LAC 33:III.509.” R. Vol. 34, p. 8482.

EPA issued three guidance memoranda confirming its “longstanding policy” that the SILs, and thus the significance of a source’s emissions, may be used as a method to demonstrate whether a proposed project causes or contributes to a predicted modeled exceedance. These memoranda provide discretion to a permitting authority, such as LDEQ, in the use of SILs, as suggested by the *Sierra Club* case discussed below. LDEQ expressly incorporated each of these memoranda into the administrative record “as justification for the uses of SILs in its PSD program.” R. Vol. 34, pp. 8481-8482.

Additionally, LDEQ’s Air Quality Modeling Procedures, cited in the AQA Report, have long incorporated significance into the “cause or contribute” determination. Once there is a predicted modeled exceedance, the applicant “must determine the proposed project’s contribution to the potential exceedance.” R. Vol. 13, p. 3044. *See also* R. Vol. 13, p. 3045 (if less than the SILs, the “the proposed project will not cause or **significantly** contribute to the potential NAAQS exceedance(s)”) (emphasis added).

Thus, for decades EPA and LDEQ have interpreted the phrase “cause or contribute” to incorporate SILs. Under the doctrine of contemporaneous construction, “when an administrative body has, over a long period of time, placed an interpretation upon a legislative enactment, that interpretation is given substantial and often decisive weight in the legislation's interpretation.” *See Board of Trustees of State Employees Group Benefits Program v. St. Landry Parish Board*, 02–0393 (La. App. 1st Cir. 2/14/03), 844 So. 2d 90, 100 (citing *State v. BP Exploration & Oil, Inc.*, 96–0716 (La. 1/14/97), 686 So. 2d 823, 828). *See also Matter of Recovery I, Inc.*, 93–0441 (La. App. 1st Cir. 4/8/94), 635 So. 2d 690, 696 (“Considerable weight should be afforded to an administrative agency's construction of a statutory scheme that it is entrusted to administer and deference must be awarded to its administrative interpretations.”); *Women's and Children's Hosp. v. State, Dept. of Health and Hospitals*, 2007-1157 (La. App. 1st Cir. 2/8/08), 984 So. 2d 760, 766 (“A reviewing court should afford considerable weight to an administrative agency's construction and interpretation of its rules and regulations and its construction and interpretation should control unless they are found to be arbitrary, capricious, or manifestly contrary to its rules and regulations.”)



LDEQ's interpretation of the statute to include SILs is supported in the jurisprudence as well. For example, in *Sierra Club v. EPA*, 705 F.3d 456 (D.C. Cir. 2013), cited by Petitioners, EPA sought (and obtained) the voluntarily remand of a rule promulgated in 2010 which included the use of SILs.<sup>9</sup> EPA sought the remand because it acknowledged that the rule, as written, afforded no discretion to a permitting authority to require additional modeling when information suggested that emissions below a SIL could nevertheless cause or contribute to a NAAQS exceedance. The court stated that EPA could respond with a rule that includes "SILs that do not allow the construction or modification of a source to evade the requirement of the Act as do the SILs in the current rule." *Id.* at 464. Thus, the D.C. Circuit suggested that SILs are acceptable as long as they do not automatically exempt a source and otherwise allow the exercise of discretion by the permitting authority.

The use of SILs was also acknowledged in this context in *Sur Contra La Contaminacion v. EPA*, 202 F.3d 443, 448 (1st Cir. 2000). There, the applicant for a PSD permit conducted modeling that demonstrated emissions of sulfur dioxide were "minutely below the significant impact level." The plaintiffs claimed that because the combination of control technologies was untested, EPA should have required a full impact analysis "despite the fact that the modeled impact was below the significant impact level that would automatically trigger further testing." *Id.* The Court held that EPA was well within its discretion to accept the applicant's modeling and "was, thus, within its discretion, under the regulations, to exempt [the applicant] from conducting a full impact analysis." *Id.* Thus, EPA's use of SILs was deemed to be within its discretion.

In sum, the record is clear—and Petitioners do not dispute—that emissions attributable to FG at all receptors showing an exceedance are below SILs. Thus, given LDEQ's (and EPA's) permissible and longstanding interpretation of the relevant statutory language, LDEQ properly found that FG's permitted emissions of criteria pollutants will not "cause or contribute" to any

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<sup>9</sup> In *Costle*, the D.C. Circuit recognized an administrative agency's inherent authority to establish *de minimis* exemptions. *Costle*, 636 F.2d at 360. In the 2010 rule, EPA applied this *de minimis* authority, stating that "when a source's ambient impact does not exceed the SIL—*i.e.*, is *de minimis*—the 'EPA considers the conduct of a cumulative air quality analysis and modeling by such a source to yield information of trivial or no value with respect to the impact of the proposed source or modification.'" *Sierra Club*, 705 F.3d at 462.

exceedance of the NAAQS and/or increments.<sup>10</sup> Consequently, Petitioners' claim that issuance of the PSD permit violates the Clean Air Act is without merit and should be rejected.

### III. Issuance of the permits does not violate Louisiana's public trust doctrine.

#### A. The scope of the public trust doctrine is far narrower than Petitioners and Alexander suggest.

Petitioners and Alexander premise the vast majority of their arguments on the "public trust" article of the Louisiana Constitution, Article IX, Section 1, as interpreted in *Save Ourselves*, 452 So. 2d 1152. According to Petitioners, this constitutional provision requires LDEQ to undertake a wide variety of actions, **none of which is specifically provided for in the statutes or regulations that govern the proposed project**, including:

- eliminating the use of "significant impact limits" in determining whether the proposed project's emission of "criteria pollutants" will cause or contribute to a violation of the National Ambient Air Quality Standards and Prevention of Significant Deterioration increments (and therefore impact public health or the environment);
- adopting EPA's suggested, but inapplicable, threshold for ethylene oxide emissions;
- performing an analysis of the "combined adverse effects" of the proposed project's toxic air pollutant emissions using a particular EPA screening model (RSEI);
- considering, in the context of the toxic air pollutant modeling, emissions from other facilities located outside of the "area of impact" defined in the applicable regulations;
- adopting ambient air standards different from those included in LDEQ's regulations;
- considering the effect of the proposed project's unregulated greenhouse gas emissions;
- and
- performing an environmental justice assessment under unspecified procedures.

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<sup>10</sup> As discussed above, LDEQ additionally noted that the modeled exceedances are highly unlikely to occur as an actual matter given: (1) the extraordinarily conservative nature of the assumptions inherent in the modeling exercise; and (2) the fact that the modeled exceedances do not occur over residential areas, but only in industrial areas that are generally not accessible to the public and where the long-term exposure contemplated by the NAAQS would not be reasonably anticipated. Contrary to Petitioners' arguments, LDEQ did not use these facts as an "exception" to the Clean Air Act requirement that FG's emission of the criteria pollutants not "cause or contribute" to the modeled exceedances. Rather, LDEQ used these facts simply to show that "the health of those living in the vicinity of the FG LA Complex will not be adversely impacted" by the emissions. R. Vol. 34, p. 8452. Of course, the issue of adverse environmental impacts comprises part of the public trust duty analysis. Here, LDEQ was simply establishing that the modeled exceedances do not cause any "adverse environmental impacts" in the form of health impacts to anyone, including local residents and workers, that would have to be balanced against the social and economic benefits of the proposed project. Petitioners do not address LDEQ's finding that actual exceedances at the modeled levels are "improbable . . . and . . . likely never to occur." R. Vol. 34 at p. 8483. Nor do they contest the finding that "long-term exposure to emissions could [not] be reasonably anticipated" at the industrial receptor locations where the modeled exceedances occur. *Id.*



Petitioners' and Alexander's reliance on the public trust doctrine as authority for these "requirements" is misplaced. Both *Save Ourselves* and subsequent decisions demonstrate that the constitutional "public trust" duty of Article IX is not a grant of carte blanche for LDEQ (and this Court) to create and impose wholly new environmental laws and standards as Petitioners and Alexander claim.

In *Save Ourselves*, the Louisiana Supreme Court considered the constitutional duty, under Article IX, of the Environmental Control Commission (ECC), which was the main agency created by the Louisiana legislature to regulate the Louisiana environment, including the permitting of hazardous waste disposal facilities. 452 So. 2d at 1154-55. The court began its analysis by noting that Article IX "mandates the legislature to enact laws to implement" its described policy of protection of the environment. *Id.* at 1154. The court moved on to describe exhaustively the specific environmental statutes that the "legislature enacted" to "implement . . . the public trust mandate" of Article IX, noting that the purpose of the act at issue was to protect the state's natural resources and to provide for "comprehensive policies" on a statewide basis to unify, coordinate, and implement programs for this purpose. *Id.* at 1154-55. The court also noted that the act established and provided for the authority of the ECC, the agency charged with carrying out the act's provisions. *Id.* at 1155.

After noting the body of regulations that had been promulgated by the ECC's predecessor agency pursuant to the legislative mandate, the court considered the "interrelationship of [the] Constitutional, Statutory and Regulatory Requirements." *Id.* at 1156. The court stated that Article IX "imposes a duty of environmental protection on all state agencies and officials, establishes a standard of environmental protection, and mandates the legislature to enact laws to implement fully this policy," then noted that ECC was specifically created and charged by the relevant legislative act with "the responsibility of reviewing each application for a permit to determine whether the proposed project or facility complies with the constitutional and legislative standards." *Id.* Next, the court analyzed the implications and operation of the constitutional-statutory scheme as follows:

The constitutional-statutory scheme implies several . . . important principles. Since the ECC, in effect, **has been designated to act as the primary public trustee of natural resources and the environment in protecting them from hazardous waste pollution**, it naturally follows that the agency must act with diligence, fairness and faithfulness to protect **this particular public interest in the resources. Consequently, the commission's role as the representative of the public interest** does not permit it to act an umpire passively calling balls



and strikes for adversaries appearing before it; the rights of the public must receive active and affirmative protection at the hands of the commission.

*Id.* at 1157 (emphasis added).

As the quoted and highlighted language demonstrates, the court's imposition of the constitutional duty on ECC stemmed from the legislature's statutory designation of that particular agency as the "primary trustee" of the environment with respect to the particular activities at issue. This is consistent with the text of Article IX, which mandates that "[t]he legislature shall enact laws to implement" the Article's policy of environmental protection. Thus, *Save Ourselves* does not create a free-floating constitutional duty on the part of courts to devise and apply new standards of environmental regulation; rather, it imposes such a duty on the legislature and the primary agency with responsibility as an outgrowth of that agency's specific statutory authority as defined by the legislature.

With respect to the nature of that duty, the *Save Ourselves* court held that the agency must consider certain factors, frequently called the "IT Questions," to comply with its constitutional duty—namely whether: (1) adverse environmental impacts have been minimized or avoided as much as possible consistent with the public welfare; (2) a cost-benefit analysis of the environmental impact costs of the proposed project balanced against the social and economic benefits of the proposed project demonstrate that the latter outweighs the former; and (3) there are alternative projects, alternative sites, and mitigating measures that would offer more protection to the environment without unduly curtailing non-environmental benefits. *Id.* at 1160. *See also In re Am. Waste and Pollution Control Co.*, 633 So. 2d 188, 194 (La. App. 1st Cir. 1993) (discussing the IT Questions from *Save Ourselves*).

In *Save Ourselves*, the court ordered the permit matter remanded to the agency because:

[f]rom the present record we cannot tell whether the agency performed its duty to see that the environment would be protected to the fullest extent possible consistent with the health, safety and welfare of the people. The record is silent on whether the agency considered alternate projects, alternate sites or mitigation measures, or whether it made any attempt to quantify environmental costs and weigh them against social and economic benefits of the project.

*Save Ourselves*, 452 So. 2d at 1160. It further noted that "the intervenor-objector introduced evidence and pointed out weaknesses in the applicant's case that were not rebutted by the applicant or explained away by the agency." *Id.* Thus, the court's holding in *Save Ourselves* was essentially procedural, not substantive, as the agency had simply failed to consider **at all** the IT Questions. *Id.* at 1161 ("Although the intervenor-objectors have not at this time persuaded us that the agency

acted in violation of law, in excess of authority, or arbitrarily, capriciously or an abuse of discretion, we conclude that in order to obtain the judicial review to which they and the public are entitled, the commission must provide at least additional analysis and reasons for the agency decision.”)

*Save Ourselves*, which holds only that state agencies must consider the IT Questions when determining whether to grant a requested permit that could significantly affect the environment, does not provide authority for the proposition that a state agency must consider and/or apply the substantive environmental standards and policies of the federal government or other states (or those that lack the status of binding law anywhere) that have not been enacted into Louisiana law. Indeed, in the thirty-seven (37) years since the *Save Ourselves* decision, no Louisiana court has interpreted the public trust doctrine in the extraordinarily expansive matter advocated by Petitioners and Alexander in the present case. To the contrary, courts including the Louisiana Supreme Court and the Louisiana Court of Appeal for the First Circuit have established the more limited nature of the doctrine’s requirements.

For example, in *Jurisich v. Jenkins*, 99-C-0076 (La. 10/19/99), 749 So. 2d 597, 605, the Louisiana Supreme Court confirmed the principle that the public trust doctrine of Article IX does not "prime statutorily defined duties." There, the Department of Wildlife and Fisheries (DWF) included a condition in its oyster lease renewals that subordinated the lessee's rights to the rights of navigation and mineral lessees of the state. *Id.* at 598. This clause conflicted with the DWF's statutory authority, which authorized the agency to include only stipulations that are "necessary and proper to develop the [oyster] industry." *Id.* The state argued that the condition was permissible under the public trust doctrine of Article IX because it promoted harmony between oyster and mineral lessees, thereby enhancing the state's mineral resources as a whole. *Id.* The Supreme Court rejected this argument, reasoning as follows:

The Legislature is vested with the legislative power of the state. Unless the Constitution expressly provides otherwise, neither another branch of government nor any person holding office in one of them, may exercise the legislative power. Simply stated, no one else can legislate but the Legislature. Correspondingly, if the Constitution limits the authority of the Legislature to delegate to administrative agencies, the corollary that follows is that those agencies cannot exceed the authority that the Legislature has granted them. In the present case, the control and supervision of all wildlife in the State, including all aquatic life is charged to the Louisiana Wildlife and Fisheries Commission and LDWF. Moreover, as provided in La. R.S. 56:425 the Secretary is authorized to execute oyster leases and shall renew oyster leases as dictated in La. R.S. 56:428(A). Furthermore, pursuant to La. R.S. 56:6(16) the Secretary is duty-bound to protect "all lessees of private oyster bedding grounds in the enjoyment of their rights."



**In light of these specifically authorized duties, we cannot agree with defendants' argument that the public trust doctrine primes statutorily defined duties. Although defendants posit their argument in terms of enhancement of the State's natural resources, they lose sight of the primary task the Legislature identified and the legislation which granted them specific powers in the performance of that task." . . . . Furthermore, defendants' position impermissibly encroaches on the function of the Legislature in the resolution of the "turf wars" between the oyster lessees and mineral lessees. In an effort to resolve those battles, the Legislature formed the Oyster Lease Damage Evaluation Board as an arm of the Department of Natural Resources to arbitrate conflicts between mineral owners and oyster leaseholders "to effect an equitable solution . . . which will result in fair and predictable treatment to the oil and gas industry while assuring the oyster lessees actual compensation for damages to their oyster beds due to mineral activity."**

*Id.* at 605 (emphasis added) (citations omitted). Thus, the court required the agency to adhere to, and remain constrained by, its statutorily defined duties, which could not be ignored under the guise or authority of the public trust doctrine of Article IX. *See also Save Our Hills*, 266 So. 3d at 932 (holding that the public trust doctrine does not require the agency to include, in the cost-benefit analysis required by *Save Ourselves*, the "economic impact the project will or may have upon neighboring landowners.")

Further, in *In re Dep't of Env'tl. Quality Permitting Decision*, 2010-CA-1194 (La. App. 1st Cir. 3/25/11), 58 So. 3d 1155, 2011 La. Unpub. LEXIS 166, at \*8, the Louisiana Court of Appeal for the First Circuit expressly rejected the permit challenger's argument that, under the public trust doctrine, LDEQ should have required use of the Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) because "the proposed facility is very close to being a major source of air emissions" to which such requirements would be applicable. In particular, the court stated that "[t]his argument is flawed from the outset in that the proposed . . . facility is, in fact, a minor source of air emissions, and as such the requirements of BACT and LAER are simply inapplicable . . . . [N]othing in the statutes or regulations concerning major sources of emissions mandates a facility to conform to the standards required to obtain a major source permit simply because the facility is *close* to being a major source of emissions." *Id.* at \*8-9. Noting that "[w]hether a proposed facility is a major source of air emissions is determined by criteria set forth by regulation," the court found that the evidence in the administrative record demonstrated that the proposed facility did not satisfy any of the regulatory criteria for being categorized as a major source; thus, LDEQ did not err in failing to apply the "major source" requirements. *Id.* at \*9-11. In addition, the court similarly rejected the permit challenger's argument that LDEQ failed to address the cumulative effects of the proposed facility (one of the



same arguments made in the present case), holding that “further modeling” beyond the LDEQ-approved protocol “including that which would have addressed the cumulative impact of the proposed emissions along with those released by other facilities operating in the area, was “not required” because the screening modeling results showed emissions at a level that did not require further analysis. *Id.* at \*21-22. Thus, on two separate assignments of error, the court rejected arguments that the public trust doctrine requires LDEQ to apply standards beyond those set forth in the actually applicable regulations promulgated by LDEQ pursuant to the authority statutorily delegated to it by the Louisiana Legislature.

Further, *Save Ourselves* establishes that though the agency must consider the IT Questions, the ultimate determination of whether to issue the permit rests within the agency’s discretion. 452 So. 2d at 1157 (“The environmental protection framework vests in the commission a latitude of discretion to determine the substantive results in each particular case.”) As discussed above, a reviewing court “should not reverse a substantive decision on the merits unless it be shown that the actual balance that was struck was arbitrary or clearly gave insufficient weight to environmental protection.” *Id.* at 1159. Following this directive, courts have, as required, affirmed the permitting decision where the agency considered the IT Questions described in *Save Ourselves* and it was not shown that the agency failed to give sufficient weight to environmental concerns in performing its cost-benefit analysis.

For example, in *Joseph v. Sec’y of Natural Resources*, 18-CA-414, 265 So. 3d 945, 955-56 (La. App. 5th Cir. 1/30/19), the court upheld the Department of Natural Resources’ granting of a Coastal Use Permit, reasoning that:

DNR’s thirty-four page Basis of Decision shows that its conclusions were made based on “thorough and careful review of the coastal use permit application, all comments, responses, data and documents submitted for consideration to this office, along with in-house data, maps, knowledge, familiarity and experience in the project area.” The decision also support DNR’s finding that the applicable guidelines have been satisfied. DNR’s lengthy analysis applying the guidelines in this matter involved an intensive and thorough evaluation of not only the factors identified in the jurisprudence, but an even more detailed evaluation and analysis of these factors and the numerous issues related thereto. . . . “[W]e find that DNR conducted a systematic consideration of all pertinent information regarding the use, the site and the impacts of the use and a balancing of their relative significant public benefits with adverse impacts.

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Viewing the record in its entirety, we do not conclude that DNR fell short in satisfying its public trust duty relative to the issuance of the permit for the proposed pipeline. There is extensive support for DNR’s compliance with its public trust duty in the record, including but not limited to its Basis of Decision, the Basic Findings

& Guideline Conformance checklist, the Reconsideration, and the handing of the public hearing and all comments arising therefrom.

*See also Gossen v. Welsh*, 2015-CA-0852 (La. App. 1st Cir. 6/2/16), 2016 La. App. Unpub. LEXIS 213, at \*18 (holding that, “based on our review of the record, plaintiffs have failed to prove that the Commissioner acted arbitrarily or capriciously or failed to give sufficient weight to environmental concerns in balancing the costs and benefits of issuing the permit orders. Rather, the record demonstrates that the Commissioner reasonably determined that any adverse environmental impacts were minimized or avoided before issuing the permit orders.”)

In the present case, Petitioners and Alexander ignore the express statutes and regulations that govern LDEQ and the proposed facility. Thus, instead of a system in which the agency with primary authority over the project at issue applies the statutes duly enacted by the legislature and the agency’s own regulations promulgated in compliance therewith, Petitioners posit a system in which the public trust doctrine requires LDEQ—and the courts—to create their own detailed network of environmental laws that impose significant requirements that neither the legislature nor the agency has seen fit to adopt/promulgate. There is no authority whatsoever under Louisiana law for an interpretation of the public trust duty in this manner, particularly given that the existing cases make clear that the public trust duty does not dictate a particular substantive result in a given case, but rather requires only that the relevant agency adequately consider and balance the proposed project’s adverse environmental impacts and social benefits.

Here, as the detailed analysis below establishes, LDEQ exhaustively considered all of the IT Questions and provided a thorough and detailed basis for its findings and ultimate determination that the requested permits should be granted. Further, though it was not required to do so by the public trust doctrine, LDEQ also considered and provided reasonable justifications for its rejection of the various arguments made by Petitioners and Alexander in the present case, including those relating to emissions, standards, and methodologies that are not required by existing Louisiana statutory and regulatory law. Consequently, as in *Joseph* and *Gossen*, the administrative record in the present case establishes that LDEQ fully complied with its public trust duty in all respects, and its issuance of the permits should be affirmed.



**B. LDEQ did not violate the public trust doctrine by failing to consider the impact of NO<sub>2</sub> and PM<sub>2.5</sub> emissions.**

In addition to claiming that LDEQ's issuance of the PSD permit to FG violates the Clean Air Act because of the proposed facility's NO<sub>2</sub> and PM<sub>2.5</sub> emissions, Petitioners claim that LDEQ's action violated its public trustee duty as well. Petitioners' Original Brief, pp. 19-28. However, because the emissions comply with the Clean Air Act NAAQS and ambient air increment as discussed above, they do not pose an adverse impact to human health or the environment. As discussed above, the NAAQS are health-based standards designed to limit the concentration of each regulated pollutant to the level "requisite to protect the public health" by an "adequate margin of safety." 42 U.S.C. § 7409(b)(1) (discussing "primary standard"). These primary standards "ensure the safety of 'sensitive' populations such as asthmatics, children and the elderly." *Miss. Comm'n on Env'tl Qual. v. EPA*, 790 F.3d 138, 146 n. 2 (D.C. Cir. 2015). The secondary standards "exist to protect the 'public welfare,' 40 C.F.R. § 50.2(b), and they prevent harms like decreased visibility and damage to animals, crops, vegetation and buildings." *Id.*

Because the NAAQS and ambient air increment standards are specifically designed to be protective of human health and the environment, assuring compliance with these standards fully satisfies LDEQ's public trustee duty. Stated otherwise, LDEQ's decision to consider the emission of the criteria pollutants NO<sub>2</sub> and PM<sub>2.5</sub> through the lens of the Clean Air Act's emission limits cannot be arbitrary and capricious. *See, e.g., Sierra Club v. FHA*, 715 F. Supp. 2d 721, 741 (S.D. Tex. 2010) ("The defendants considered air quality through the framework used by the EPA and the Clean Air Act to analyze air quality issues -- the NAAQS for criteria pollutants -- and concluded that construction of Segment E would not lead the Houston area to violate the NAAQS for any criteria pollutant. **The defendants' decision to consider air pollution issues through the same framework used by the EPA to enforce the Clean Air Act cannot be considered arbitrary or capricious.** Also, since the FEIS specifically addresses the issue of particulate matter under the NAAQS framework, the court concludes that the defendants have not failed to consider the highway's effects on local levels of particulate matter.") (emphasis added), *aff'd*, 435 Fed. Appx. 368 (5th Cir. 2011). That is particularly true where, as LDEQ noted, the actual emissions of, and exposures to, these pollutants will likely be significantly less than the maximum modeled emissions used to determine compliance with the NAAQS and ambient air emission standards. Thus, contrary to Petitioners' claim, LDEQ carefully considered the issue of criteria pollutant



impacts (including but not limited to the use of SILs) and did not violate its public trustee duty by issuing the PSD permit in light of the proposed facility's NO<sub>2</sub> and PM<sub>2.5</sub> emissions.

**C. LDEQ did not violate the public trust doctrine and/or La. R.S. 33:109.1 by failing to consider the impact of ethylene oxide emissions.**

Petitioners and Alexander claim that LDEQ violated its public trustee duty and/or La. R.S. 33:109.1 by failing to “fully consider” the impact of the proposed facility's ethylene oxide emissions and failing to require measures to minimize the harmful effects of such emissions. Petitioners' Original Brief, pp. 28-36. *See also* Alexander's Original Brief, pp. 27-28.

LDEQ thoroughly addressed the issue of ethylene oxide emissions in both its Basis for Decision and Public Comment Responses. First, LDEQ acknowledged the 2014 National Air Toxics Assessment (NATA), which suggested that there were “*potential* elevated risks in some census tracts,” which are “largely driven by an update to the compound's inhalation unit risk factor (URF) derived by EPA in 2016.” R. Vol. 34, p. 8453. LDEQ then reviewed data published in the Louisiana Tumor Registry (LTR) to determine if those suggested “*potential* elevated risks” have been realized where ethylene oxide has actually been emitted in the state. In particular, LDEQ reviewed cancer data from census tracts where the largest ethylene oxide emitters are located and thus where ethylene oxide has historically been emitted. The objective data from the LTR demonstrated that “the average rates for all cancers combined and for breast cancer in these areas are *below* states averages.” R. Vol. 34, p. 8453. Thus, LDEQ found that the cancer rate in census tracts where ethylene oxide has been emitted is lower than the state average, suggesting that the “*potential* elevated risks” mentioned by the EPA have not been realized. R. Vol. 34, p. 8453 (“recently published data from the Louisiana Tumor Registry does not support EPA's supposition.”)

LDEQ also reviewed research regarding the 2014 NATA, concluding that the research “demonstrates that EPA's risk assessment for [ethylene oxide] significantly over-predicts the number of cancers that were observed in a U.S. worker study used to derive the 0.02 µg/m<sup>3</sup> value.” R. Vol. 34, p. 8454. Based on the amount of ethylene oxide produced naturally in the body and on background concentrations, EPA's assessment would be predicted to cause more cancer than is actually observed. Although LDEQ did not adopt the threshold of 7 µg/m<sup>3</sup> recommended by the Texas Commission on Environmental Quality, it noted that even 1/10<sup>th</sup> of that standard “is higher than the maximum ground level concentration predicted by dispersion modeling.” *Id.*

Though it disagreed with the threshold, LDEQ nevertheless found that, even if EPA's 0.02  $\mu\text{g}/\text{m}^3$  threshold were applied protectively to the proposed project, residential communities "would not be adversely impacted." R. Vol. 34, p. 8454. Using Exhibit P-1 to the Supplemental EAS (R. Vol. 19, p. 4766; Figure 2, below), LDEQ found that the areas to the north and northeast "are beyond the . . . red line" and that the red line "does not extend into any residential areas on the eastern side of the Mississippi River." R. Vol. 34, pp. 8454, 8531.

Finally, LDEQ also noted multiple environmental protections to which ethylene oxide emissions will be subjected. Specifically, the Title V permit contains numerous specific conditions regulating and controlling emissions of ethylene oxide. For example, the Ethylene Glycol 1 Permit contains 191 specific conditions, with 100 of them applicable to emission units that will or may emit ethylene oxide: the thermal oxidizer (20 specific conditions); the ground flare (14 specific conditions); and fugitive emissions (66 specific conditions). R. Vol. 33, pp. 8131-8149. Further, FG is subject to 40 CFR 63 Subpart H, one of the most stringent leak detection and repair programs. *See* LAC 33:III.2199, Table 9. LDEQ made those requirements even more stringent and noted that FG must monitor for ethylene oxide at its fence line. R. Vol. 34, pp. 8455-8456.

LDEQ also considered the impacts of ethylene oxide in response to public comments. *See* R. Vol. 34, pp. 8530-8532; Vol. 35, pp. 8533-8534, 8546-8547, 8587, 8601 (reliance on Louisiana Tumor Registry data), 8605.

Thus, in the Basis for Decision and the Public Comments Response Summary, LDEQ provided individualized consideration of the real and potential impacts of the emissions of ethylene oxide, taking into account the cancer risk thresholds, the historic cancer rate in areas where ethylene oxide has historically been emitted, the geographic extent of modeled concentrations, the lack of exposure of residents to levels above the cancer risk thresholds, and the extensive controls placed on ethylene oxide emissions. Consequently, contrary to Petitioners' and Alexander's claim, LDEQ did not violate its public trustee duty by issuing the PSD permit by "failing to consider" the proposed facility's ethylene oxide emissions.

#### **1. Ethylene Oxide Emissions at the Proposed Facility**

Ethylene oxide is not produced as a product or stored at the facility. Instead, it is created and exists temporarily as an intermediate reaction product during the production of ethylene



glycol.<sup>11</sup> Ethylene is reacted with oxygen, methane, and a catalyst, creating ethylene oxide, carbon dioxide, and water. The ethylene oxide is then converted to ethylene glycol.

As set forth in the permits for the EG-1 and EG-2 plants, ethylene oxide may be emitted from a thermal oxidizer and a multi-point ground flare, both of which are control devices designed to reduce the amount of ethylene oxide emitted into the atmosphere. The thermal oxidizer is expected to provide 99.9% destruction. The multi-point ground flare will be used as a back-up control device for the thermal oxidizer and is expected to provide at least 99% destruction. Ethylene oxide may also be emitted as fugitive emissions from valves, seals, or other such equipment. *See* R. Vol. 33, pp. 8105-8107.

## **2. The Risk-Based Ambient Air Standards for Ethylene Oxide**

As described by LDEQ in its Louisiana Guidance for Air Permitting Actions, ambient air standards are atmospheric concentration limits on pollutants that are recognized “to be detrimental to the general health in concentrations that exceed the listed standards. These standards can be found in LAC 33:III.5112, Table 51.2.” Second Supplement to Record, Vol. 1, p. 8850. Conversely, levels of pollutants **below** ambient air standards are, by definition, **not** detrimental to general health. The ambient air standard for ethylene oxide is an annual average of 1.00  $\mu\text{g}/\text{m}^3$ . LAC 33:III.5112.Table 51.2. This annual average is based on “a residual risk of one in ten thousand.” LAC 33:III.5112.Table 51.2 - Explanatory Notes.

Since the establishment of the 1.0  $\mu\text{g}/\text{m}^3$  ambient air standard, EPA has updated its assessment of the concentration of ethylene oxide it suggests is “associated with a 1-in-10,000 cancer risk, for a lifetime of continuous exposure,” setting that level at 0.02  $\mu\text{g}/\text{m}^3$ . R. Vol. 34, p. 8453. However, because NATA itself and the threshold of 0.02  $\text{mg}/\text{m}^3$  are not regulatory standards, they do not impose direct regulatory limitations on the facility. In other words, EPA’s suggested 0.02  $\mu\text{g}/\text{m}^3$  threshold does not apply to the proposed project, which remains governed by the 1.0  $\mu\text{g}/\text{m}^3$  standard, which is a risk-based standard established to be protective of human health.

## **3. FG’s Modeling Efforts Regarding Ethylene Oxide**

To establish that emissions of ethylene oxide and other toxic air pollutants will be below the ambient air standards and not detrimental to the public health, FG conducted extensive

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<sup>11</sup> FG will have two ethylene glycol (EG) plants: EG-1 and EG-2. The permit for EG-1 is found at R. Vol. 33, pp. 8103-8149. The permit for EG-2 is found at R. Vol. 31, pp. 7733-7776. Each plant is permitted to emit 3.85 tons per year of ethylene oxide.



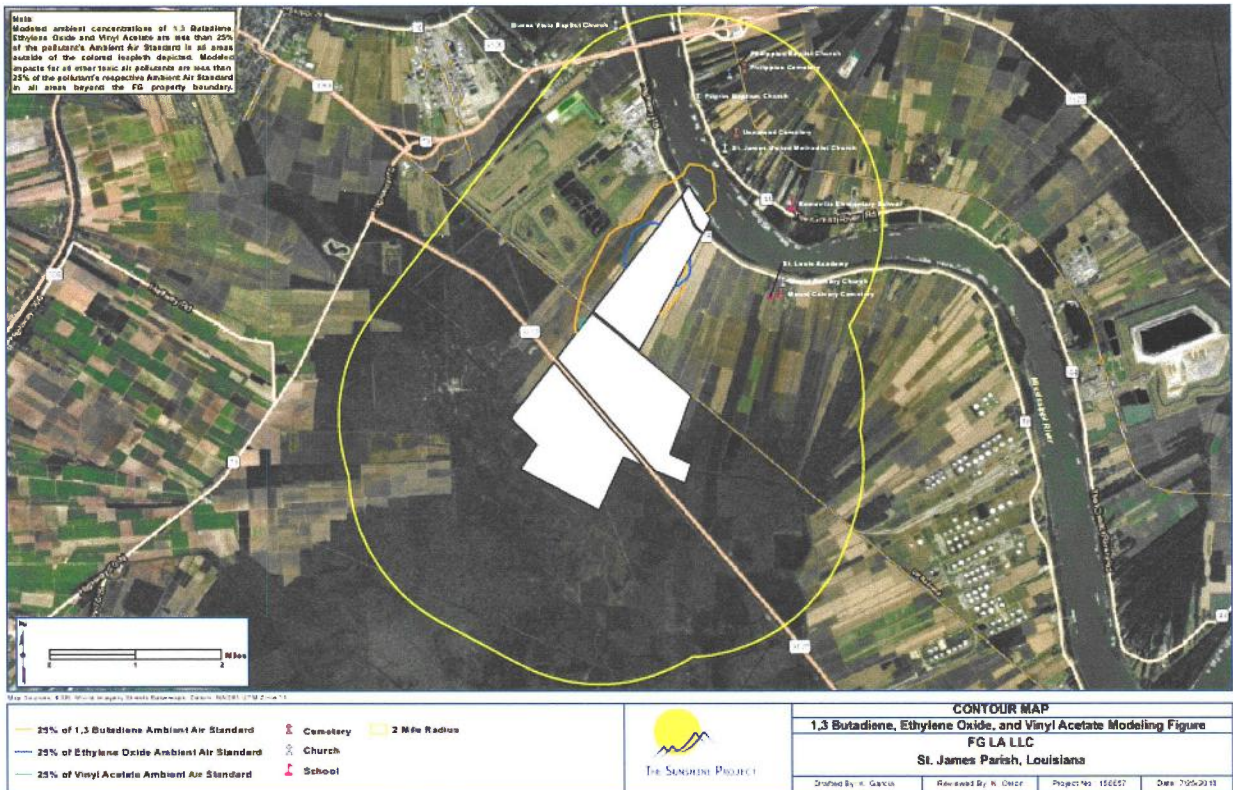
modeling. *See* R. Vol. 13, pp. 3046-3048 (AQA Report, Section 11.3). FG modeled the proposed toxic air pollutant (TAP) emission rates as set forth in AQA Report, App. B. R. Vol. 13, pp. 3046, 3056. The proposed emissions of ethylene oxide, and thus the amount modeled at that time, was 8.71 tons per year. R. Vol. 13, p. 3056. Thus, FG initially modeled a ton more of ethylene oxide emissions than those actually permitted.

The AQA Report details the modeling effort. Of the TAPs to be emitted from the Facility, only eleven will be emitted at levels greater than the minimum emission rate (MER) set forth in LAC 33:III.5112.Table 51.1. R. Vol. 13, p. 3046. The eleven TAPs were subject to an initial screening analysis, which established that all eleven were well below the ambient air standards. Only six, including ethylene oxide, had modeled concentrations greater than 7.5 percent of the AAS. R. Vol. 13, pp. 3046-3047 (AQA Report, Table 11-7). Those six were subjected to initial refined modeling, which established that the maximum modeled concentration of ethylene oxide ( $0.74 \mu\text{g}/\text{m}^3$ ) was less than 75% of the AAS (of  $1.0 \mu\text{g}/\text{m}^3$ ). R. Vol. 13, p. 3048 (AQA Report, Table 11-8). Thus, no additional modeling was required for ethylene oxide pursuant to LDEQ's modeling protocols.

Although not required, FG performed an updated impact analysis for ethylene oxide. R. Vol. 19, pp. 4533-4545. Based on FG's updated equipment component count and stream speciation, emissions of ethylene oxide were reduced, which also reduced the maximum modeled concentration from  $0.74 \mu\text{g}/\text{m}^3$  to  $0.41 \mu\text{g}/\text{m}^3$ . R. Vol. 19, pp. 4536. The updated modeling report establishes that the maximum modeled ambient air concentration of  $0.41 \mu\text{g}/\text{m}^3$  is located on the western property boundary. *See* Appendix B to the present brief. There is no evidence in the record that the predicted ambient air concentration of  $0.41 \mu\text{g}/\text{m}^3$  occurs at any location beyond the FG property boundary.

FG documented the extent of modeled concentrations of ethylene oxide at off-site locations based on a percentage of both the applicable  $1.0 \mu\text{g}/\text{m}^3$  ambient air standard and EPA's suggested, but inapplicable,  $0.02 \mu\text{g}/\text{m}^3$  cancer risk threshold. First, FG established that the predicted impacts are less than twenty-five percent of the ambient air standard ( $0.25 \mu\text{g}/\text{m}^3$ ) outside the blue-lined area shown in Exhibit P to the Supplemental EAS. R. Vol. 19, p. 4764; Figure 1, below. Thus, the evidence in the administrative record establishes that predicted off-property concentrations ( $0.25 \mu\text{g}/\text{m}^3$ , the blue lines in Figure 1 below) are much less than the ambient air standard, occur very close to the property line, and clearly do not extend to any nearby community. R. Vol. 19, p. 4739.

Figure 1

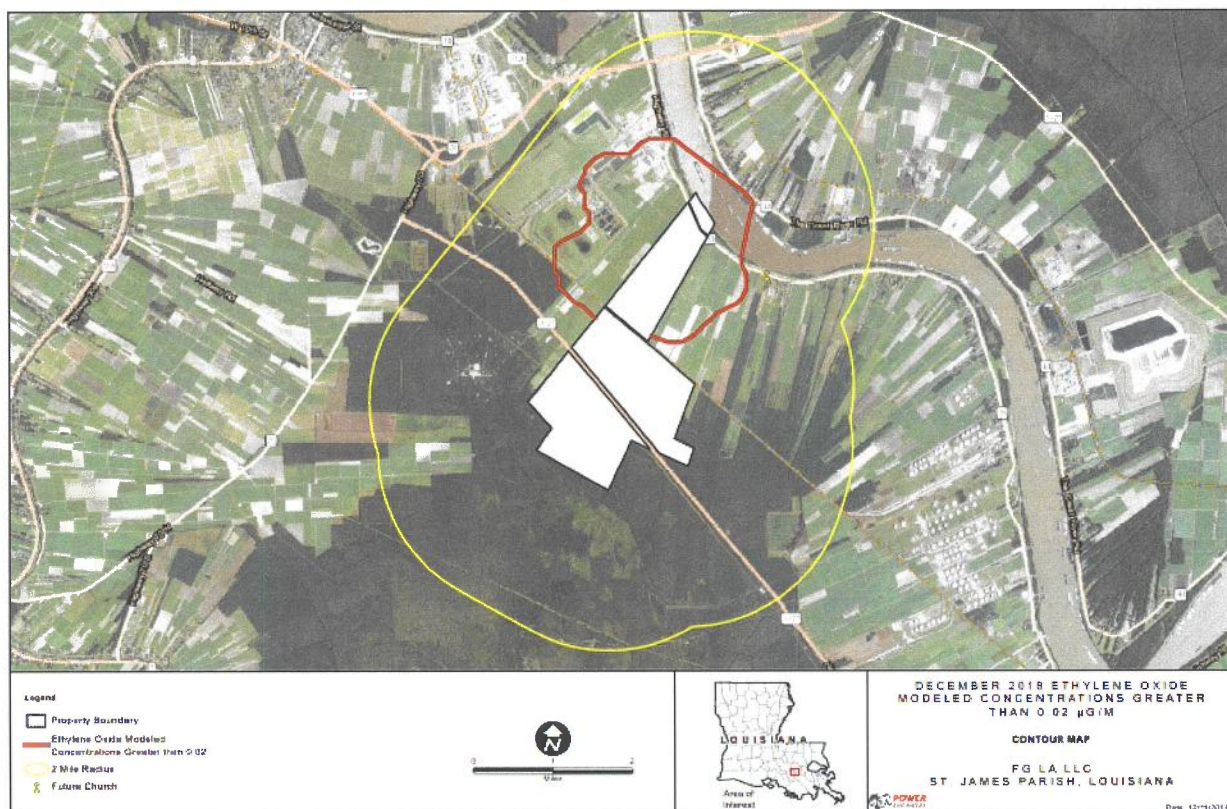


Source: Supplemental EAS, Exhibit P (R. Vol. 19, p. 4764)

Second, to document that no residential communities will be subjected to ethylene oxide emissions above EPA’s suggested long-term inhalation threshold for ethylene oxide of  $0.02 \mu\text{g}/\text{m}^3$ , FG established the maximum predicted potential concentration of ethylene oxide at greater than  $0.02 \mu\text{g}/\text{m}^3$  does not extend past the red lines in Exhibit P-1 to the Supplemental EAS. R. Vol. 19, p. 4766; Figure 2, below. Therefore, potential ethylene oxide exposure at greater than  $0.02 \mu\text{g}/\text{m}^3$  does not extend to the nearest community to the east or to residential areas across the Mississippi River, as shown in Exhibit P-1 (Figure 2, below).



Figure 2



Source: Supplemental EAS, Exhibit P-1 (R. Vol. 19, p. 4766)

4. **Petitioners' claims are without merit.**

a. **LDEQ's conclusion that the levels of ethylene oxide do not pose a health risk was not arbitrary or capricious.**

Petitioners claim that the administrative record shows that emissions of ethylene oxide “will exceed the cancer risk threshold set by the federal government in communities near the site.” Petitioners’ Original Brief, p. 29. However, as discussed above, the applicable regulatory ambient air standard for ethylene oxide is  $1.0 \mu\text{g}/\text{m}^3$ , not  $0.02 \mu\text{g}/\text{m}^3$ . Petitioners make no argument that the  $1.0 \mu\text{g}/\text{m}^3$  standard was exceeded anywhere off-site. Indeed, as discussed above, no off-site location will be exposed to anything close to that amount. That should end the analysis because, as discussed above, the public trustee duty does not require LDEQ to apply federal standards (real or suggested) or the standards of other states that deviate from Louisiana’s applicable emission standards.

However, though it was not required to do so, LDEQ went on to analyze the ethylene oxide emissions under the EPA-suggested threshold. To support their claim that ethylene oxide emissions above EPA’s suggested threshold extends to nearby communities, Petitioners first incorrectly claim that the modeling shows that “ethylene oxide concentrations **beyond the edge of the site** reach as high as  $0.41 \mu\text{g}/\text{m}^3$ .” Petitioners’ Original Brief, pp. 29-30 and n.107 (emphasis added). As proof, Petitioners point only to LDEQ’s Basis for Decision, at page 14, in which the

“maximum ground level concentration” is identified in a table as 0.41  $\mu\text{g}/\text{m}^3$ . But LDEQ makes no statement—on that page or anywhere else—that the maximum ground level concentration is located “beyond [the] site,” as claimed by the Petitioners. As noted in Appendix B to the present brief, the “maximum ground level concentration” of 0.41  $\mu\text{g}/\text{m}^3$  is actually located **on**, not beyond, the western property boundary.

Petitioners then refer to Figure 2, above (Exhibit P-1 to the Supplemental EAS, R. Vol. 19, p. 4766), stating that “all areas within the red line” exceed the EPA’s threshold of 0.02  $\mu\text{g}/\text{m}^3$ . However, the converse is also true—all areas **outside** the red line are **below** the EPA’s threshold of 0.02  $\mu\text{g}/\text{m}^3$ . The area of Welcome to the east and northeast and the area of Union across the Mississippi River are beyond the red line, meaning that those residential communities are not exposed to ethylene oxide above EPA’s threshold, as LDEQ expressly concluded. R. Vol. 34, pp. 8454 (“the residential areas to the east and northeast of the FG LA complex, including St. Louis Academy and Mt. Cavalry Baptist Church, are well beyond the 0.02  $\mu\text{g}/\text{m}^3$  isopleth (red line).”)

Petitioners attempt to sidestep this obvious and undisputed fact by stating that certain areas within the red line are areas designated by St. James Parish as Residential Growth. However, there is no residential community, such as Welcome or Union, presently located within the red lines. Further, at the time the air permit applications were submitted to LDEQ, the area noted by Petitioners was classified as Residential/Future Industrial. It was not until May 2, 2018 that the area was re-designated as Residential Growth. Petitioners’ Original Brief, p. 31, n.113; Second Supplement to Record, Vol. 1, p. 8873.<sup>12</sup> Even after that change, the St. James Parish Planning Commission (on November 13, 2018) and the St. James Parish Council (**unanimously**, on January 24, 2019) approved the facility pursuant to the same ordinance now cited by Petitioners. Second Supplement to Record, Vol. 1, pp. 8886-8890. Clearly, LDEQ cannot be faulted for failing to consider even the post-application version of the land use plan where the local authorities charged with implementing that plan approved the proposed project even after the zoning classification was changed. That is especially true where, as here, the record undisputedly shows that the area in question will be exposed to much less than the **actually applicable** risk-based emission standard of 1.0  $\mu\text{g}/\text{m}^3$ .

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<sup>12</sup> See *infra* pages 43-44 for discussion of Petitioners’ request to take judicial notice of this information and why such request should be denied.



Petitioners also fault LDEQ for a narrow view of “residential areas,” claiming that the red line eclipses the highway, batture, and levee on the east side of the Mississippi River. However, Petitioners’ statements actually confirm LDEQ’s conclusion. Petitioners do not claim that the red line extends into an area occupied by residential dwellings. Certainly, there are no residences along the batture or levee. Petitioners admit that the red line extends at its farthest reach to no more than a portion of the highway and not to any residential dwellings that may be located beyond that highway. Petitioners’ Original Brief, p. 32; the red line merely “eclipses” the highway. EPA’s suggested threshold level of 0.02  $\mu\text{g}/\text{m}^3$  is based on a “lifetime of continuous exposure.” R. Vol. 34, p. 8453. Based on the evidence in the record, the residents of Union will not be subjected to a “lifetime of continuous exposure” to ethylene oxide at levels above EPA’s threshold level because they do not reside on the highway, batture, or levee. Thus, LDEQ fully considered the issue and was not arbitrary and capricious in finding that ethylene oxide emissions will not pose a health risk.

**b. LDEQ did not abuse its discretion or act arbitrarily or capriciously in relying upon data from the Louisiana Tumor Registry.**

Louisiana law requires that health care providers report cancer cases to the Louisiana Tumor Registry (LTR). La. R.S. 40:1105.5. LTR collects this data and publishes annual reports regarding cancer incidences and deaths. Actual, empirical data collected by the Louisiana State University School of Public Health and published by the LTR establish that cancer incidences and deaths in the Industrial Corridor (Ascension, East Baton Rouge, Iberville, St. Charles, St. James, St. John the Baptist, and West Baton Rouge Parishes) are not significantly different from the rest of the state. Second Supplement to Record, Vol. 1, p. 8846.

The LTR specifically addresses cancer risks, stating that “the cancer incidence rate indicates the average cancer risk of the residents in an area.” Second Supplement to Record, Vol. 1, p. 8847 (citing LTR’s March 2019 Report, at p. 55). Indeed, LTR data has been used to “identify areas and populations at high risk of cancer.” *Id.* (citing LTR’s March 2019 Report, p. 1).

Nevertheless, Petitioners claim that LDEQ “impermissibly relied” on the LTR. Petitioners’ Original Brief, p. 32. However, Petitioners provide no statute, regulation, or policy preventing or prohibiting LDEQ from utilizing the actual cancer data contained in the LTR to highlight that census tracts with historical ethylene oxide emissions have a lower cancer rate than the state as a whole. Further, LDEQ noted that the 2014 NATA’s updated unit risk factor has been roundly

criticized by the American Chemistry Council, TCEQ, and other research. R. Vol. 34, p. 8454. In its public comment responses, LDEQ further explained that it “does not believe that the LTR data is incomplete or inaccurate,” and “[t]he LTR also speaks to the quality of its data” insofar as “LTR data have qualified for inclusion [in the North American Association of Central Cancer Registries annual publication] every year since the inception of the certification process in 1997 and have been certified at the gold level for high quality and timely data every year since 1997.” R. Vol. 35, p. 8601. In considering this highly technical information, LDEQ is certainly within the “latitude of discretion” afforded by the Louisiana Constitution’s public trust doctrine. *Save Ourselves*, 452 So. 2d at 1157. Indeed, it is well-established that administrative agencies are entitled to substantial deference with respect to technical and specialized issues uniquely within their expertise. *See, e.g., Catamaran PBM of Md., Inc. v. State*, 2014-CA-1672c (La. App. 1st Cir. 6/5/15), 174 So. 3d 683, 690 (agency is afforded great deference in decisions made within the scope of its experience and expertise). *See also Utah Envtl. Cong. v. Bosworth*, 443 F.3d 732, 740 (10th Cir. 2006) (deference to an agency is especially strong where the challenged decisions involve technical or scientific matters within the agency’s area of expertise).

Instead of citing a statute or regulation that prevents the use of the LTR, Petitioners rely on statements taken out of context from a ‘question and answer’ document published by LTR. Second Supplement to Record, Vol. 1, p. 8718. The quoted statements come from the answer to the question “Does ‘Cancer Alley’ exist?,” to which LTR answered that “the existence of ‘Cancer Alley has not been proven so far” due to the “limited number of studies investigating whether residents . . . have an increased cancer risk.” *Id.* Because neither LDEQ nor FG was attempting to prove the existence of Cancer Alley as part of this permit process, the answer relied on by Petitioners is irrelevant as to whether LDEQ may utilize actual data from the LTR as part of its evaluation of risks, and LDEQ has thoroughly and adequately justified its rationale for utilizing the LTR data.

**c. LDEQ did not act arbitrarily or capriciously in concluding that FG avoided ethylene oxide emissions to the maximum extent possible consistent with the public welfare.**

The record fully supports LDEQ’s finding that FG has avoided ethylene oxide emissions to the maximum extent possible consistent with the public welfare. First, FG voluntarily reduced the amount of ethylene oxide it sought to emit. FG originally requested the emission of 18.07 tons per year of ethylene oxide each from Ethylene Glycol 1 and Ethylene Glycol 2. R. Vol. 3, p. 660;



R. Vol. 4, p. 767. It later reduced that amount to a total of 8.71 tons per year, which is the amount initially modeled. R. Vol. 13, p. 3056. After FG performed an updated impact analysis for ethylene oxide, it reduced the amount to be emitted to 7.7 tons per year, which was also modeled and which is the amount actually permitted. R. Vol. 19, pp. 4533-4545; R. Vol. 33, p. 8102-8149; R. Vol. 31, pp. 7732-7776.

Second, LDEQ imposed the maximum achievable control technology (MACT) on the emission sources at the Ethylene Glycol 1 Plant and the Ethylene Glycol 2 Plant, thereby ensuring that ethylene oxide emissions are as low as possible. As explained by LDEQ, MACT “is the maximum degree of reduction in emissions that is deemed achievable in a category or subcategory and cannot be less stringent than the emission control that is achieved in practice by the best controlled similar source.” R. Vol. 35, p. 8584.

Under the CAA, each emission standard promulgated under CAA Section 112 (42 U.S.C. § 7412) must require “the maximum degree of reduction in emissions of the hazardous air pollutants subject to this section.” 42 U.S.C. § 7412(d)(2). *See also* LAC 33:III.5109.A.1. EPA has promulgated numerous such standards in 40 CFR Part 63. Of these, several are applicable to the Ethylene Glycol 1 Plant and the Ethylene Glycol 2 Plant: Subpart A, Subpart G, and Subpart H. *See* R. Vol. 33, pp. 8118-8119.

Using the Ethylene Glycol 1 Plant Permit as an example, ethylene oxide may be emitted from a thermal oxidizer (EQT 0040), a multi-point ground flare (EQT 0162), and as fugitive emissions (FUG 0002). R. Vol. 33, pp. 8129-8130. In turn, each of these emission points is subjected to detailed Specific Conditions (SC) as set forth in the Ethylene Glycol 1 Plant Permit (see R. Vol. 33, pp. 8131-8149), as follows:

- Thermal oxidizer (EQT 0040): SC 1-20;
- Multi-point ground flare (EQT 0162): SC 48-61; and
- Fugitive emissions (FUG 0002): SC 87-152.

These specific conditions incorporate the provisions of 40 CFR Part 63, Subparts A, G, or H. As such, they incorporate the MACT standards into the permit. By way of example, the MACT standard for the thermal oxidizer is found in 40 CFR § 63.116(2)(2), which requires a facility to “reduce emissions of total organic hazardous air pollutants by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent.” This MACT standard is imposed on the thermal oxidizer by Specific Condition No. 8 in the Ethylene Glycol 1 Plant

Permit. R. Vol. 33, p. 8131. However, FG decreased emissions even further by committing to a destruction and removal efficiency of 99.9% as shown in the emissions calculations. R. Vol. 3, p. 0736; Vol. 33, p. 8107 (“The Thermal Oxidizer is expected to provide 99.9% destruction of VOC compounds.”) A similar MACT standard is incorporated for the ground flare by Specific Condition No. 56 (R. Vol. 33, p. 8137), with FG committed to a destruction and removal efficiency of 99.0% in the emissions calculations. R. Vol. 3, p. 0739. Thus, not only are maximum achievable emission standards imposed on FG by the permits, FG also further reduced emissions by increasing the destruction efficiency for the thermal oxidizer and the ground flare.

As to fugitive emissions, LDEQ imposed on FG “one of the most stringent federal leak detection and repair (LDAR) programs promulgated to date (40 CFR 63 Subpart H).” R. Vol. 34, p. 8455. Additionally, LDEQ imposed its own more stringent requirements for components in EO service,” pursuant to its own authority under state law. *Id.* First, LDEQ required that all valves in ethylene oxide service must utilize “certified low-leaking valve packing technology,” which will serve to prevent leaks above 100 parts per million. R. Vol. 34, p. 8455; R. Vol. 33, p. 8146 (Ethylene Glycol 1 Plant Permit, SC No. 151). Second, connectors must be monitored quarterly and not annually as required under Subpart H. R. Vol. 34, p. 8455; R. Vol. 33, p. 8145 (Ethylene Glycol 1 Plant Permit, SC No. 149).

Finally, FG must conduct monitoring along its eastern property boundary for ethylene oxide. R. Vol. 34, pp. 8455-8456. Although the Petitioners claim that LDEQ outsourced monitoring to the parish, the monitoring program is incorporated into the Ethylene Glycol 1 Plant permit and is thus enforceable by LDEQ against FG. *See* R. Vol. 33, p. 8147 (Specific Condition No. 173). This monitoring program, which is not required under the Clean Air Act or the Louisiana Environmental Quality Act, is designed after a similar program for petroleum refineries, with some modifications. R. Vol. 34, p. 8455; Second Supplement to Record, Vol. 1, pp. 8886- 8890. LDEQ has also required FG to monitor along its northeastern property boundary beginning at Highway 18 and extending 1,500 feet to the southwest. R. Vol. 34, p. 8456.

**d. LDEQ did not violate La. R.S. 33:109.1.**

Petitioners claim that LDEQ violated state law—namely, La R.S. 33:109.1, which states that “state agencies and departments shall consider such adopted master plan before undertaking any activity or action which would affect the adopted elements of the master plan.” In particular, Petitioners claim that LDEQ “failed to recognize” that certain areas inside the red line representing



exposure to 0.02 µg/m<sup>3</sup> of ethylene oxide had been designated in the most recent St. James Parish land use plan for “Residential Growth.” Petitioners’ Original Brief, pp. 30, 34. What Petitioners fail to note, however, is that the land-use change to Residential Growth and the alleged violation of La. R.S. 33:109.1 were not brought to LDEQ’s attention by any commenter, including Petitioners, even though it occurred in May, 2018, long before Petitioners’ August, 2019 comments were filed with LDEQ. *See* R. Vol. 28, pp. 6931-6932, 6945-6968.<sup>13</sup> For this reason, Petitioners seek, in footnotes, to have this Court take judicial notice of the revised land use plan to support their claim. Petitioners’ Original Brief, p. 31 nn.111 and 113.

Judicial notice is inappropriate given that Petitioners had every opportunity to include this information in the administrative record and bring it to LDEQ’s attention before the agency made its determinations on the permit applications. In particular, Louisiana Revised Statutes 30:2014.3 provides that “[t]he applicant and any person who may become a party to a . . . judicial proceeding to review the secretary’s decision on an application **must** raise all reasonably ascertainable available evidence supporting his position on the permit application **prior** to the issuance of the final decision by the [DEQ] so that the evidence may be made a part of the administrative record for the application.” La. R.S. 30:2014.3(B) (emphasis added). The statute further provides that “[n]o evidence shall be admissible by any party to a . . . judicial proceeding to review the secretary’s decision on the application that was not submitted to the [DEQ] prior to issuance of a final decision or made a part of the administrative record, unless good cause is shown for the failure to submit it.” La. R.S. 30:2014.3(C). The Louisiana Court of Appeal for the First Circuit did not hesitate to apply these provisions to preclude a permit challenger from raising an argument (relating to LDEQ’s alleged failure to consider a particular alternative design) that was not presented to LDEQ prior to issuance of the permit. *See In re La. Dep’t of Env’tl Quality Permitting Decision*, 2011 La. Unpub. LEXIS 166, at \*17-19. Here, it would be patently unfair to allow Petitioners to raise an argument only now, at the stage of merits briefing, contending that LDEQ “failed to recognize” and “consider” information that Petitioners themselves failed to submit to LDEQ in advance of its decision and did not make any effort to have added to the record

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<sup>13</sup> In their comments, Petitioners complained only of the manner in which the St. James land use plan was changed from Residential to Residential/Future Industrial in 2014. Their comments made no mention of the 2018 change and any potential impact of ethylene oxide emissions on the area designated for Residential Growth.

previously, when this action was remanded once to LDEQ for the taking and consideration of additional evidence.

However, even if Petitioners were allowed to make the argument now and have this Court take judicial notice of the May 2, 2018 change in land use designation (which occurred after FG filed its permit applications and after LDEQ granted FG's application for expedited consideration of the permit applications on November 7, 2017<sup>14</sup>), the argument fails. First, as discussed in detail above, LDEQ found that the **actually applicable** ambient air standard of 1.0  $\mu\text{g}/\text{m}^3$  would not be exceeded anywhere beyond the property boundary, including in the area re-designated as Residential Growth in the 2018 land use plan.<sup>15</sup> Given that fact, LDEQ's approval of the permits simply would not "affect the adopted elements of the master plan" within the meaning of Section 33:109.1. Second, LDEQ was aware of the St. James Parish Council's **unanimous** approval of the Facility pursuant to the 2018 local land use plan, which approval was rendered in an appeal brought by Petitioner RISE St. James to the earlier approval by the St. James Planning Commission.<sup>16</sup> Second Supplement to Record, Vol. 1, pp. 8886–8890. That ordinance includes specific provisions for monitoring for, among others, ethylene oxide emissions. *Id.* And, finally, Petitioners concede that LDEQ did "consider" zoning and local land use designations. Petitioners' Original Brief in Support, p. 34 (stating that LDEQ "recognized" that the Facility is in an area specifically designated by St. James Parish for industrial development"); R. Vol. 34, p. 8444. For any all of these reasons, there is no violation of Section 33:109.1.

**D. LDEQ did not violate the public trust doctrine by failing to consider the combined adverse impacts of toxic air pollutants.**

Petitioners claim that LDEQ violated its public trustee duty by "failing to do a cumulative assessment" of the impacts of toxic air pollutants (TAPs)—*i.e.*, failing to consider the "combined adverse effects" of the TAPs. Petitioners' Original Brief, pp. 36-37. Specifically, they claim that LDEQ acted arbitrarily and capriciously in: (1) evaluating the TAPs on a "pollutant-by-pollutant"

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<sup>14</sup> See R. Vol. 2, p. 478.

<sup>15</sup> Further, LDEQ specifically considered the areas "to the east and northeast" and found they would not be adversely impacted, "even if one were to conservatively employ 0.02  $\mu\text{g}/\text{m}^3$  as a protective standard." R. Vol. 34, p. 8454-8455. Obviously, by including a discussion about effects of ethylene oxide at or below the 0.02  $\mu\text{g}/\text{m}^3$  threshold and the "red line" map itself, LDEQ considered (*i.e.*, examined, deliberated about, and pondered over) the effects of ethylene oxide both within and outside of the red line even though that line does not represent the actually applicable regulatory standard.

<sup>16</sup> The Council explicitly found that the location of the site "is away from residential uses." Second Supplement to Record, Vol. 1, p. 8890.



basis as provided for by law<sup>17</sup>; (2) failing to consider emissions from other facilities outside the “area of impact” for which LDEQ’s air modeling guidance requires analysis; and (3) applying the allegedly “outdated ambient air quality standards” provided for under existing Louisiana law. *Id.* at 37. Thus, once again, Petitioners are attempting to use the constitutional public trust doctrine to require LDEQ to apply analyses and standards that are well beyond anything required by the existing statutory law enacted by Louisiana’s legislature (and LDEQ’s regulations promulgated pursuant to such statutes).

LDEQ thoroughly addressed the issue of toxic air pollutant emissions in both its Basis for Decision and Public Comment Responses. In the BFD, LDEQ noted that “[a]t the state level, Louisiana has established unique, risk-based ambient air standards (AAS) for 99 compounds known as toxic air pollutants, or TAPs.” R. Vol. 34, p. 8448. These compounds include chemicals such as benzene, ethylene oxide, and formaldehyde, “as well as a number of chemicals that are *not* federally regulated” as hazardous air pollutants.” *Id.* The “AAS contemplate multiple sources of pollution and establish protective limits on cumulative emissions that should ordinarily prevent adverse air quality impacts.” *Id.* LDEQ further noted that it “found that emissions from the FG LA Complex will not cause or contribute to a violation of a[n] . . . AAS using AERMOD, EPA’s ‘preferred/recommended’ dispersion model. Therefore, the permits do not allow for air quality impacts that could adversely affect human health or the environment.” R. Vol. 34, pp. 8448, 8450.

In the Public Comment Responses, LDEQ addressed several comments related to Petitioners’ current claim regarding cumulative toxic air emissions:

- With respect to a commenter’s request that LDEQ require an “adequate human health risk assessment” for the proposed project’s emissions, LDEQ found that it had adequately assessed “the impact [of the Facility] on human health and the environment” based on the dispersion modeling discussed in Section VI of the Basis of Decision, other assessments showing maximum predicted concentrations of TAPs “will be well below recognized health-based thresholds,” EJScreen data indicating that NATA Air Toxics Cancer Risks “for the local area are comparable or less than state averages,” and the Louisiana Tumor Registry data “which suggest local cancer rates are not elevated.” R. Vol. 35, p. 8597.

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<sup>17</sup> See LAC 33:III.5109.B and B.3 (providing that an applicant “shall demonstrate compliance with an ambient air standard in an application for a permit” and “shall determine the status of compliance, beyond the source’s property line, with applicable ambient air standards.”)

Based upon those multiple lines of evidence and analysis, LDEQ determined that it “does not believe further analysis are required in order to adequately assess the impact of the FG LA Complex on human health and the environment.” R. Vol. 35, p. 8598.

- With respect to a commenter’s claims that LDEQ must consider the effect of the “cumulative effects on the population from the existing plants” in St. James Parish, LDEQ reiterated that ambient air standards “contemplate multiple sources of pollution and establish protective limits on cumulative emissions that should ordinarily prevent adverse air quality impacts.” R. Vol. 35, pp. 8595-8596. LDEQ further noted that for toxic air pollutants, “LDEQ uses a threshold of 7.5 percent of the AAS to determine if refined modeling is required.” R. Vol. 35, p. 8596. No such refined modeling was required in the present case for any of the toxic air pollutants under this standard. *Id. See also* R. Vol. 34, p. 8450.
- With respect to a commenter’s claim that “[r]ecent analysis shows that Formosa would double and triple toxic exposures for area residents,” LDEQ provided a thorough and detailed explanation of why it did not utilize the EPA’s Risk-Screening Environmental Indicators (RSEI) model, but instead performed the “additional investigation” recommended by the EPA that resulted in LDEQ’s finding that “emissions from the FG LA Complex, together with those of nearby sources . . . will not allow for air quality impacts that could adversely affect human health or the environment.” R. Vol. 35, pp. 8603-04. In particular, LDEQ found that “RSEI is a screening-level model that helps one evaluate Toxics Release Inventory (TRI) data, but, contrary to the asserting of the comment . . . RSEI uses simplified data for modeling, generates results that represent a ‘worst-case scenario,’ and *cannot* be used to assess risk.” R. Vol. 35, p. 8604. The agency noted that EPA itself cautions against the use of the RSEI model to: (1) conclude that a particular chemical release is causing harm to a specific population or location; (2) draw conclusions about individual risk or generate quantitative risk estimates; and, most importantly, (3) **draw conclusions or make decisions about the risk posed by any particular facility.** *Id.* Indeed, as LDEQ noted, EPA itself states that “RSEI does not perform a risk assessment, but is rather a screening-level tool to help identify situations of potential concern. Additional investigation should always be performed before any conclusions regarding risk are made.” *Id.* Finally, LDEQ noted that it (but not the



commenter or ProPublica, the organization behind the “recent analysis” mentioned by the commenter) performed the “additional analysis,” stating unequivocally that “[u]sing *actual* stack heights and locations; release parameters . . . ; permitted emission rates; local meteorological data; and EPA’s ‘preferred/recommended’ dispersion model (AERMOD), LDEQ found that emissions from the FG Complex, together with those of nearby sources . . . will not allow for air quality impacts that could adversely affect human health or the environment.” *Id.*<sup>18</sup>

Thus, in the Basis for Decision and the Public Comments Response Summary, LDEQ provided individualized consideration of the real and potential impacts of the emissions of toxic air pollutants, taking into account the results of site-specific modeling conducted pursuant to state law using EPA’s preferred model and taking note of decreasing overall toxic air pollutant levels in St. James Parish. It also provided a specific response why additional analysis is not required or helpful, including use of the RSEI model advocated by Petitioners. Consequently, contrary to Petitioners’ claim, LDEQ did not violate its public trustee duty by “failing to consider” the proposed facility’s toxic air pollutant emissions.

**1. LDEQ did not act arbitrarily or capriciously in declining to do a combined pollutant assessment.**

LDEQ found that it had adequately assessed “the impact [of the Facility] on human health and the environment” based on the dispersion modeling discussed in Section VI of the Basis for Decision. R. Vol. 35, p. 8597. The dispersion modeling, which was performed according to LDEQ’s regulatory air modeling protocol and approved by LDEQ in advance, established that not a single TAP was above its risk-based ambient air standard at **any** location. *See* R. Vol. 13, pp. 3046-3048 (AQA Report, Section 11.3).

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<sup>18</sup> LDEQ also addressed the impact of emissions of “800 tons per year of toxic air pollutants.” R. Vol. 35, pp. 8581-8582. In its response, LDEQ incorporated its discussion of the “impact of air emissions on human health and the environment” from Section VI of the Basis for Decision. *Id.* Further, LDEQ noted that the Title V permit requires the Facility to “meet or exceed the requirements of all applicable federal and state air quality regulations, including federal maximum achievable control technology (MACT) standards under 40 CFR [Part] 63 for hazardous air pollutants.” *Id.*

LDEQ also addressed the declining overall level of TAPs in St. James Parish, finding that TAPs emissions had dropped 64.7 percent between 1995 and 2018 and 37.9 percent between 2007 and 2018. R. Vol. 35, p. 8543-8544. In reviewing this data, and data from the Louisiana Tumor Registry, LDEQ found that “cancer incident rates, even in an industrial area, cannot be directly and solely attributed to industrial activity.” R. Vol. 35, p. 8543-8545. *See also* additional responses addressing the overall impact of TAPs and individual TAPs: overall cancer risks (R. Vol. 34, p. 8528); ethylene oxide (R. Vol. 34, p. 8529 to R. Vol. 35, p. 8533); benzene (R. Vol. 35, pp. 8558-8559; 8563-8564); and carcinogens (R. Vol. 35, p. 8601).

Petitioners do not dispute the correctness of LDEQ's finding that not a single TAP would be emitted off-site at a level above the applicable ambient air standard. Instead, they urge that the public trust doctrine requires LDEQ to do more than the legally-required assessment and modeling by using the RSEI or some other unidentified model to derive an aggregate "total toxic load" from all emissions, combined. However, LDEQ properly rejected this argument.

First, as discussed above, the public trust doctrine does not require further assessments of "cumulative effects" of air emissions beyond those required by the LDEQ's regulations. *See In re Dep't of Env'tl. Quality Permitting Decision*, 2011 La. Unpub. LEXIS 166, at \*21-22 (holding that LDEQ did not violate the public trust doctrine by failing to order further modeling where such additional analysis was not required by the applicable regulations).

Second, as discussed below, the RSEI model advocated by Petitioners is not designed or intended for use to assess the risk posed by a particular facility, which is precisely what Petitioners are asking for LDEQ to be required to do with it. Even if the public trust doctrine did require LDEQ to go beyond the actually applicable modeling protocol (which is denied), it does not require LDEQ to utilize an EPA model in a manner directly discouraged by EPA.

Third, despite the availability of all of the input parameters, Petitioners did not, in comments or in their current briefing, provide any indication of what running the RSEI model would even show in terms of the "aggregate toxic load" of emissions from the proposed facility and the health concerns posed by such emissions.<sup>19</sup> Instead, they merely fault LDEQ for doing what neither they nor ProPublica did. *See* Petitioners' Original Brief, p. 39 ("Had LDEQ run the RSEI Model with the information it has about Formosa Plastics' toxic emissions, LDEQ would have obtained toxicity-weighted concentrations and a RSEI score for the impacted communities.") Neither Petitioners' briefing nor the ProPublica article provides "RSEI scores" and/or any information relating aggregate toxic load to health consequences; rather, the ProPublica article merely states that residents of the area will face more emissions of toxic air pollutants than they already do. Petitioners' Original Brief, p. 40. Thus, neither Petitioners' briefing nor the ProPublica article provides any basis for concluding that use of the RSEI model would even have provided useful, health-based information concerning the "combined" effects of all toxic pollutants at the

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<sup>19</sup> In their brief, Petitioners note that they "submitted comprehensive comments that included written reports from engineers with decades of experience in air permitting." Petitioners' Original Brief, p. 6. However, despite the availability of these air permitting engineers, they did not run the RSEI model themselves and/or provide an assessment of the "aggregate toxic pollutants load" that would demonstrate some harm to the public.



site. *Cf. In re Dep't of Env'tl. Quality Permitting Decision*, 2011 La. Unpub. LEXIS 166, at \*11, 13 (noting that the permit challenger “does not specify what problems allegedly existed with the [permittee’s] calculations” and “offered no evidence that [the permittee’s] calculations were flawed.”)

Finally, Petitioners are simply incorrect that LDEQ’s various assessments of toxic air pollutants were insufficient. In addition to the TAP modeling discussed above, the “other assessments” conducted by LDEQ included a review of EPA’s Integrated Risk Information System (IRIS) for multiple TAPs, background levels of ethylene oxide and risk levels associated with such background levels, acute exposure levels to ethylene oxide, and benzene emission levels. *See* R. Vol. 34, p. 8529, 8530-8532; R. Vol. 34, p. 8532 through R. Vol. 35, p. 8533; R. Vol. 35, pp. 8563-8564. It also included an analysis of EJScreen data, which show that the NATA Air Toxics Cancer Risk for St. James Parish is comparable to state averages and that the Louisiana Tumor Registry data suggests local cancer rates are not elevated. R. Vol. 35, p. 8597. That evidence establishes that the existing cancer risks borne by the residents of St. James Parish, when accounting for the current level of TAPs in the ambient air, is not elevated. Taken together, these additional assessments establish that the TAPs to be emitted are below applicable risk-based standards and will not be detrimental to human health. Thus, when this data regarding the existing levels and cancer risks is considered along with the established fact that all TAPs emitted by FG in the future will be well below all applicable risk-based ambient air standards, LDEQ’s conclusion that no additional analyses are necessary is eminently reasonable and well within the discretion provided by the public trust doctrine.

**2. LDEQ did not abuse its discretion or act arbitrarily or capriciously in declining to utilize the RSEI model.**

Petitioners claim that LDEQ should have run the Risk-Screening Environmental Indicators (RSEI) model or some similar (but unnamed) model. In their comments on this specific matter submitted on November 26, 2019, Petitioners took the position that LDEQ “must consider the information provided by ProPublica or conduct its own assessment using the RSEI model.” R. Vol. 30, p. 7436 (emphasis added). Clearly, Petitioners sought LDEQ to consider the information provided by ProPublica as one of two acceptable options. LDEQ obliged and responded by considering the information provided by ProPublica. *See* R. Vol. 35, pp. 8603-8604.

As set forth in the November public comments (R. Vol. 30, pp. 7435-7436) and Petitioners’ Original Brief, ProPublica used the RSEI model to allegedly demonstrate that residents across the

Mississippi River will face “double” the amount of TAPs and the community to the east could face more than “triple” the amount of TAPs.<sup>20</sup> LDEQ, as requested by Petitioners, specifically addressed this comment, the RSEI model, and the information provided by ProPublica. R. Vol. 35, pp. 8603-8604. As discussed above, LDEQ concluded (correctly) that the EPA itself recognizes the model should not be used to “draw conclusions or make decisions about the risk posed by any particular facility.”<sup>21</sup> R. Vol. 35, p. 8604. As LDEQ correctly recognized, the RSEI model is, at best, “a screening level tool to help identify situations of potential concern.” *Id.* Instead of relying on the RSEI model results, “additional investigation should always be performed.” *Id.* However, neither the commenter (*i.e.*, Petitioners) nor ProPublica conducted any additional assessment, as suggested by EPA.

However, LDEQ did perform the site-specific “additional investigation” recommended by EPA after the RSEI model is run. In particular, “[u]sing *actual* stack heights and locations; release parameters (*e.g.*, velocity, temperature); permitted emission rates; local meteorological data; and EPA’s “preferred/recommended” dispersion model (AERMOD), LDEQ found that emissions from the FG LA Complex, together with those of nearby sources . . . will not allow for air quality impacts that could adversely affect human health or the environment.” *Id.*

Thus, LDEQ reviewed the use of the RSEI model, the limitations of the RSEI model, the information submitted by ProPublica and Petitioners, and conducted the “additional investigation” recommended by EPA (which neither ProPublica nor Petitioners performed) when the RSEI model is run. LDEQ concluded, based on this review, that the cumulative emissions in the area will not adversely affect human health or the environment. While this conclusion may not be the one sought by Petitioners, LDEQ reasonably exercised the discretion afforded it in conducting the review and reaching its conclusion.

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<sup>20</sup> The word “allegedly” is used here because the record does not actually contain the model results. The record only contains comments in which the model and the article are referenced.

<sup>21</sup> The selection or rejection of a particular technical methodology is a matter that implicates agency expertise and, as such, is entitled to particularly strong deference. *See, e.g., Catamaran PBM of Md.*, 174 So. 3d at 690 (agency is afforded great deference in decisions made within the scope of its experience and expertise). *See also Utah Env’tl. Cong.*, 443 F.3d at 740 (deference to an agency is especially strong where the challenged decisions involve technical or scientific matters within the agency’s area of expertise); *Qwest Corp. v. FCC*, 258 F.3d 1191, 1206 (10th Cir. 2001) (deferring to agency’s expertise on language to run computer model of costs).



**3. LDEQ did not abuse its discretion or act arbitrarily or capriciously in applying the actually applicable toxic air emission standards.**

In this section of their brief, Petitioners again fault LDEQ for applying “outdated ambient air quality standards.” Petitioners’ Original Brief, p. 38. FG has already addressed that argument above at pages 24-31 and 44-51. Stated simply, the public trust doctrine does not require LDEQ to adopt standards that go well beyond those enacted by the Louisiana legislature and by LDEQ in regulations promulgated pursuant to those statutes. Further, Petitioners have not availed themselves of their right to seek a mandamus to force the suggested 36-month review or submitted a petition for rulemaking pursuant to LAC 33:I.Chapter 9. As such, their attack on the existing standards is a prohibited collateral attack.

**E. LDEQ did not violate the public trust doctrine by failing to consider greenhouse gases.**

Petitioners claim that LDEQ violated its public trustee duty by “failing to consider” the environmental impacts associated with the proposed facility’s greenhouse gas emissions. Petitioners’ Original Brief, pp. 49-57. In particular, they claim that the public trust duty requires an assessment of climate-related impacts, which was not provided by LDEQ. Ironically, they also spend several pages attempting to shoot down LDEQ’s assessment of the project’s climate-related impacts (which would be impossible to do had LDEQ not actually addressed greenhouse gas emissions, as Petitioners claim). Petitioners’ arguments fail for a multitude of reasons.

First, as discussed above, LDEQ did indeed quantify and substantively consider the proposed project’s greenhouse gas emissions. R. Vol. 34 at p. 8441 (quantifying greenhouse gas emissions at 13,628,091 tons) and pp. 8457-8458 (analyzing greenhouse gas emissions issue). *See also* R. Vol. 35 at pp. 8534-8535 (responding to public comments concerning greenhouse gas emissions). With respect to the issue, LDEQ made several relevant findings: (1) the permits require best available control technology for greenhouse gas emissions; (2) because of the global nature of the problem, there is no current methodology or guidance to determine how a specific facility’s “incremental contribution” to existing greenhouse gas emissions would translate into physical effects on the environment; (3) exposure to greenhouse gas emissions does not adversely affect human health; (4) because of global mixing, greenhouse gases emitted anywhere in the world affect climate change everywhere in the world, so construction of the proposed facility in St. James Parish will have no greater effect on Louisiana in terms of greenhouse cases than if the facility were constructed elsewhere; (5) the proposed facility will employ state-of-the-art technology that

should result in less natural gas consumption per unit of production than existing facilities manufacturing the same products, many of which use naphtha (derived from crude oil) or coal in their production processes<sup>22</sup>; and (6) use of the “social cost of carbon” model proposed by a commenter is not warranted because LDEQ is not required to consider the social cost of carbon and, in any event, application of the model would “lead to absurd results, effectively precluding *any* new industrial development.” R. Vol. 34 at pp. 8457-8458; R. Vol. 35 at pp. 8534-8535. These findings demonstrate beyond the shadow of a doubt that, regardless of whether it was required to do so by the public trust doctrine, LDEQ did in fact consider greenhouse gas emissions, contrary to Petitioners’ claim.

Second, in any event, no court has found or even suggested that the public trust duty requires a Louisiana agency to consider **unregulated** greenhouse gas emissions and their impact on global climate.<sup>23</sup> As discussed in detail above, the public trust doctrine is not an invitation for LDEQ and/or Louisiana courts to override legislative determinations or effectively enact new laws where the legislature has not seen fit to legislate. As suggested by the absence of any mention of same in Petitioners’ brief, no federal or state standards exist that regulate the emission of greenhouse gases at facilities like FG’s proposed facility. Thus, unlike the criteria and toxic pollutants discussed above for which NAAQS and AAS have been promulgated, the federal and state legislatures have, to date, chosen **not** to regulate the quantity of greenhouse gases that can be emitted from such projects. It is for this reason that Petitioners predicate their claim on the Louisiana public trust doctrine, asking this Court to step in where the legislative branch has chosen not to tread, and trying to use the Louisiana Constitution to impose greenhouse gas regulation where no statutory or regulatory standards exist.

Because there are no such Louisiana “public trust duty” cases to cite, Petitioners rely upon federal cases decided under the National Environmental Protection Act (NEPA), stating that “many courts have affirmed the need and ability to assess [greenhouse gas] impacts.” Petitioners’ Original Brief, p. 52. However, as LDEQ recognized in the present case, NEPA does not apply to the LDEQ permitting process. R. Vol. 34, p. 8535 (“LDEQ is not a federal agency and is not

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<sup>22</sup> See also R. Vol. 14, p. 3462 (FG’s Environmental Assessment Statement discussing the greenhouse gas benefits of using an ethane-based process over a naphtha-based process).

<sup>23</sup> That includes the *In re Am. Waste and Save Ourselves* decisions cited misleadingly on page 49 of Petitioners’ brief to suggest that they held that the public trust duty “includes an assessment of climate-related impacts.” Petitioners’ Original Brief, p. 49 (citing *In re Am Waste*, 633 So. 2d at 194, and *Save Ourselves*, 452 So. 2d at 1157). Neither of these cases addressed greenhouse gases.



subject to NEPA provisions. Further, Louisiana is *not* identified as a state with NEPA-like environmental planning requirements.”)

Further, Petitioners failed to inform the Court that even in the NEPA context, many other courts have held that a federal agency is **not** required to quantify or weigh greenhouse gas emissions in their NEPA analysis beyond the extent to which LDEQ analyzed the issue in the present case (or, in some cases, at all). *See, e.g., EarthReports, Inc. v. Fed. Energy Reg. Comm’n*, 828 F.3d 929 (D.C. Cir. 2016) (affirming agency’s refusal to quantify greenhouse gas emissions from natural gas export terminal on the ground that there is “no standard methodology to determine how a project’s incremental contribution to [greenhouse gases] would result in physical effects on the environment”)<sup>24</sup>; *Coalition for the Advancement of Reg’l Transp. v. FHA*, 576 Fed. Appx. 477, 491 (6th Cir. 2014) (upholding failure of environmental impact statement to analyze greenhouse gas emissions in exhaustive detail and finding the defendants’ approach to such emission was not arbitrary and capricious because “defendants cannot usefully evaluate greenhouse gas emissions on a Project-specific basis because of the non-localized, global nature of potential climate impacts.”); *Barnes v. U.S. Dep’t of Transp.*, 655 F.3d 1124, 1140 (9th Cir. 2011) (rejecting a challenge to the environmental assessment for an airport upgrade project on the ground that the small percentage (less than .03 percent of U.S.-based greenhouse gases) would “not translate into locally quantifiable environmental impacts given the global nature of climate change”)<sup>25</sup>; *Hapner v. Tidwell*, 713 F.3d 1239, 1244-45 (9th Cir. 2010) (rejecting challenge to an environmental assessment for a wildfire fuel-reduction project); *Rocky Mt. Wild v. Bernhardt*, 506 F. Supp. 3d 1169, 1183 (D. Utah 2020) (upholding BLM’s environmental assessment and decision to lease where the agency quantified greenhouse gas emissions insofar as possible and discussed climate change qualitatively; further noting that analysis of cumulative impacts is not required where such analysis is “too speculative or hypothetical to meaningfully contribute to NEPA’s goals of public disclosure and informed decisionmaking”); *Sierra Club v. FHA*, 715 F. Supp. 2d 721, 741 (S.D.

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<sup>24</sup> The quoted language is nearly identical to language used by LDEQ in its Basis for Decision. *See* R. Vol. 34 at p. 8457 (“there is no current methodology or guidance to determine how a specific industrial facility’s incremental contribution to [greenhouse gases] would translate into physical effects on the global environment.”)

<sup>25</sup> The quoted language touches on another point raised by LDEQ in its analysis of greenhouse gases. *See* R. Vol. 34 at p. 8458 (“As the result of global mixing, [greenhouse gases] emitted anywhere in the world affect climate change everywhere in the world. . . Construction of the FG LA Complex in St. James Parish will, in effect, have no more impact on Louisiana (relative to [greenhouse gases]) than if the facility was constructed elsewhere.”)

Tex. 2010) (“The plaintiffs have not . . . pointed to any law or regulation showing that defendants’ failure to consider greenhouse gas emissions makes the FEIS inadequate, or makes the decision of the FHWA arbitrary or capricious. Because the defendants considered the issues of particulate matter and the effects of air pollution on human health, and because the defendants were not required to consider the effects of [the proposed project] on greenhouse gas emissions, the court concludes that the defendants are entitled to summary judgment”), *aff’d* 435 Fed. Appx. 368 (5th Cir. 2011); *N.C. Alliance for Transp. Reform, Inc. v. U.S. Dep’t of Transp.*, 713 F. Supp. 2d 491, 521 (M.D.N.C. 2010) (holding that the agency was not required to include in the environmental impact statement the effect the proposed highway project would have on greenhouse gas emissions); *Audubon Naturalist Soc’y v. U.S. Dep’t of Transp.*, 524 F. Supp. 2d 642, 708 (D. Md. 2007) (rejecting claim that the NEPA analysis of a highway project must include an analysis of greenhouse gases on the ground that it was inappropriate to the “project level planning and development process”). And Petitioners have not cited a single case in which a court has rejected an agency’s climate change analysis as **substantively** inadequate under NEPA—*i.e.*, in which a court has held that an agency was arbitrary and capricious in its ultimate decision to permit/authorize a particular project because of its emission of unregulated greenhouse gases.

Third, consistent with their overarching approach to the present judicial review action, Petitioners have not: (1) offered any indication of precisely **how** LDEQ should be required to “consider the climate impacts” on the remand Petitioners seek, apart from their argument that the agency should have applied the Social Cost of Carbon protocol to quantify a social, though not environmental, impact of the greenhouse gas emissions; and (2) shown how application of the protocol would have tipped the balance in favor of denying the requested permits for the project.

With respect to its rejection of the Social Cost of Carbon protocol specifically, LDEQ did not arbitrarily and capriciously “reject known methods for determining the costs associated with greenhouse emissions.” The selection or rejection of a particular technical methodology is a matter that implicates agency expertise and, as such, is entitled to particularly strong deference. *See, e.g., Catamaran PBM of Md., Inc.*, 174 So. 3d at 690 (agency is afforded great deference in decisions made within the scope of its experience and expertise). *See also Utah Env’tl. Cong.*, 443 F.3d at 740 (deference to an agency is especially strong where the challenged decisions involve technical or scientific matters within the agency’s area of expertise); *Qwest Corp.*, 258 F.3d at 1206 (deferring to agency’s expertise on language to run computer model of costs). Here, LDEQ refused



to apply the protocol because its application “would lead to absurd results, effectively precluding *any* new industrial development,” giving the example that, under the protocol, a basic home hot water heater could have a “social cost” as high as \$4,318 per year. R. Vol. 34 at p. 8535. There was nothing arbitrary or capricious about this decision, as recently recognized by a federal district court that accepted a federal agency’s decision not to use the very same protocol where the agency found it “too uncertain and indeterminate to be useful to the analysis.” *See Montana v. Bernhardt*, 443 F. Supp. 3d 1185, 1196 (D. Mont. 2020).

With respect to the more general issue, Petitioners’ failure to specify how climate change must be considered by LDEQ is not surprising given the unregulated nature of greenhouse gas emissions from projects like the present one. What particular amount of emissions would be too much? How should LDEQ (and this Court) make that determination? And does LDEQ even have the authority to deny the permits because of the consequences of emissions that the federal and state legislatures have not seen fit to regulate at all? *See Dep’t of Transp. v. Public Citizen*, 541 U.S. 752, 767-68 (2004) (holding that agency has no obligation to gather and consider environmental information with respect to which it has no statutory authority to act); *Sierra Club*, 715 F. Supp. 2d at 741 (“The plaintiffs have not . . . pointed to any law or regulation showing that defendants’ failure to consider greenhouse gas emissions makes the FEIS inadequate, or makes the decision of the FHWA arbitrary or capricious. Because the defendants considered the issues of particulate matter and the effects of air pollution on human health, and because the defendants were not required to consider the effects of [the proposed project] on greenhouse gas emissions, the court concludes that the defendants are entitled to summary judgment”). Of course, it is in Petitioners’ interest not to be more specific, as a project can just as effectively be killed by remands for the agency to perform unspecified analyses that are not delineated in any statutory or regulatory scheme (or in any court decision, for that matter) when the agency guesses wrong about what the court would ultimately deem sufficient.

In sum, even though no court has ever held that the public trust doctrine requires the consideration of greenhouse gas emissions that are unregulated by federal and state laws, LDEQ did in fact quantify and adequately consider such emissions when deciding whether to issue FG’s operating and PSD permits (none of which relates to greenhouse gases), and its reasoning echoes many of the very same concerns of the federal courts in the decisions cited above upholding an agency’s greenhouse gas analysis (or even its failure to analyze the effect of greenhouse gases at

all) under NEPA. Thus, its consideration of those emissions was not arbitrary and capricious—*i.e.*, “without reason.”

**F. LDEQ did not violate the public trust doctrine by failing to include adverse environmental impacts in its cost-benefit analysis.**

Petitioners claim that LDEQ further violated its public trust duty because it did not consider the “environmental impacts” associated with the permitted emissions and “failed to include any environmental impacts in its cost-benefit analysis.” Petitioners’ Original Brief, pp. 49, 57. Alexander similarly critiques LDEQ’s analysis of “potential and real adverse environmental effects.” Alexander’s Original Brief, p. 25.

However, the Basis for Decision demonstrates that LDEQ did indeed thoroughly consider and address the adverse environmental impacts and incorporate that analysis in its cost-benefit analysis. Specifically, Section VII (“Avoidance of Adverse Environmental Effects”) analyzes **nine** different media and performs a cost-benefit analysis for each. R. Vol. 34, pp. 8459-8469. LDEQ performed a thorough analysis for each media and concluded that “FG LA has avoided, to the maximum extent possible, adverse environmental impacts without unduly curtailing nonenvironmental benefits.” R. Vol. 34, p. 8469. LDEQ’s specific analysis of the nine media besides air was as follows.

LDEQ *first* addressed wastewater: during construction, during operations, spills, and discharge of plastic pellets. R. Vol. 34, pp. 8459-8462. With respect to each,

- LDEQ found that FG must comply the terms of its General Permit for Discharges of Storm Water from Construction Activities (Five (5) Acres or More), develop a Storm Water Pollution Prevention Plan, prepare a Spill Prevention, Control, and Countermeasure Plan, discharge wastewater from hydrostatic and vessel testing in compliance with the general permit standards. R. Vol. 34, p. 8459.
- LDEQ has approved FG's application for a Water Quality Certification (WQC). *Id.* at 8460.
- FG must apply for and secure a Louisiana Pollutant Discharge Elimination System (LPDES) permit in order to discharge these wastewater streams to waters of the state. *Id.*
- The Central Wastewater Treatment Plant (CWTP) will be designed to meet all applicable LPDES effluent limitations, including those under 40 CFR § 414 (Organic Chemicals, Plastics, and Synthetic Fibers) and 40 CFR § 423 (Steam Electric Power Generating Point Source Category). R. Vol. 34, pp. 8460-8461.



- “FG LA must develop an SPCC Plan as required by 40 CFR § 112 and a Spill Prevention and Control (SPC) Plan as required by LAC 33:IX.Chapter 9 to address contingency planning and implementation of operating procedures and best management practices to prevent and control the discharge of pollutants resulting from spill events.” *See* R. Vol. 34, p. 8461.
- LDEQ will require FG to design and operate the CWTP to prevent the discharge of plastic pellets into waters of the state (*i.e.*, a zero discharge standard). A zero discharge standard will also be imposed on the FG Complex's storm water outfall. *See* R. Vol. 34, p. 8478.

*Second*, LDEQ considered groundwater, determining that no groundwater will be utilized because all water used for industrial purposes will be obtained from the Mississippi River. R. Vol. 34, p. 8462.

*Third*, LDEQ addressed waste, determining that the FG Complex has been designed to “reclaim as many byproducts and process constituents as possible for reuse or sale.” R. Vol. 34, p. 8462. The design allows for the recovery of vent gases for reuse in the process and using heat from processes as fuel and thereby minimizing natural gas usage. R. Vol. 34, pp. 8462-8463. LDEQ reasoned that FG will prepare a Waste Minimization Plan to reduce the volumes of hazardous wastes used and generated at the facility, all solid and hazardous will be collected and temporarily stored in accordance with federal and state regulations prior to being transported to an authorized offsite facility as appropriate, and industrial and hazardous waste will not be constructed, stored, or disposed of at the facility. R. Vol. 34, p. 8463.

*Fourth*, LDEQ considered process safety, determining that the FG Complex will be subject to 40 CFR 68—Chemical Accident Prevention Provisions, which aims to “prevent accidental releases of substances that can cause serious harm to the public and the environment from short-term exposures and to mitigate the severity of release that do occur.” R. Vol. 34, p. 8463. LDEQ explained that FG evaluated potential failure scenarios for substances that could be onsite “using the RMP\*Comp software program developed by the National Oceanic and Atmospheric Administration (NOAH) and EPA.” R. Vol. 34, p. 8464. LDEQ concluded that the modeling established “established that the community to the east is well beyond the maximum extent of modeled impact area endpoints for the scenarios evaluated.” *Id.* Further, LDEQ found that the results of modeling performed by FG “demonstrates that St. Louis Elementary School, Mt. Calvary

Baptist Church, and the surrounding community are well beyond the maximum extent of modeled impact endpoints for the failure scenarios identified.” *Id.*

LDEQ further reasoned that FG will have to comply with both:

1. Occupational Safety and Health Administration's process safety management (PSM) requirements under 29 CFR § 1910.119, which are designed to prevent or minimize the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals; and
2. Section 30-64 of the St. James Parish Code of Ordinances ("Defensive Emergency Protective Measures") that require FG to comply with the most recent editions of the National Fire Protection Association (NFPA) procedures and provide a water source in addition to municipal water supply for defensive emergency protection measures.  
R. Vol. 34, p. 8465.

LDEQ also concluded that the Complex will not impede evacuation routes in the unlikely event of an incident. *Id.*

*Fifth*, as to wetlands, LDEQ concluded that FG “has avoided and minimized construction in wetland areas as much as possible.” R. Vol. 34, p. 8465. LDEQ recognized that only about 61.7 acres of the 908.9 acres delineated as wetlands (less than seven percent) will be permanently impacted, and the majority of those impacted acres are newly vegetated areas in and around the borrow pits. *Id.* LDEQ further reasoned that, for the relatively few impacted acres, FG will comply with the compensatory mitigation requirements promulgated pursuant to Section 404 of the Clean Water Act and LDNR’s Office of Coastal Management issued Coastal Use Permit No. P20171048 for the PG LA Complex on February 19, 2019. R. Vol. 34, pp. 8465-66.

*Sixth*, with respect to traffic, LDEQ found that, based on the traffic analyses prepared for FG, while the FG Complex will increase local traffic during construction and operation, FG “is addressing the community’s concerns about traffic along Highway 18 (River Road).” *Id.* This includes that FG will receive “the vast majority of incoming raw materials will be transported . . . by pipeline” and “preferentially ship products by railcars, barges, and ships to the extent possible,” the Complex will not have permanent operational access entrances along Highway 18 (with the exception of a gated driveway used for infrequent access), and the river-adjacent property will be connected to the property via bridge crossing and aerial pipe racks “such that that plant traffic will not impede the flow of traffic on Highway 18.” *Id.*



*Seventh*, concerning noise, LDEQ concluded that “the sound or noise levels emanating from the [FG Complex] will produce sound levels in the surrounding area that are comparable to existing conditions.” R. Vol 34, p. 8467. LDEQ based this conclusion on the results of a study commission by FG based on readings that provided more than 1800 data points.

*Eighth*, as to cultural resources, LDEQ recognized that FG “conducted on an extensive cultural resources survey to fulfill the requirements under Section 106 of the National Historic Preservation Act.” R. Vol. 34, p. 8467. As part of the survey Division of Archaeology of the Louisiana Department of Culture, Recreation and Tourism identified two cemeteries that may be located within the project area: the Acadia Cemetery and the Buena Vista Cemetery. *Id.* LDEQ concluded that “the Division of Archaeology has no objection to further development in the area” of the Acadia Cemetery and agrees with FG’s approach of fencing the area it controls in the area identified as the Buena Vista Cemetery to protect the site. R. Vol. 34, pp. 8467-8468.

Finally, *ninth*, with respect to endangered species, LDEQ concluded that “FG LA conducted an extensive assessment of the potential impact of the FG LA Complex on threatened and endangered species.” R. Vol. 34, p. 8468. In its analysis, LDEQ reasoned that:

- USFWS noted there are “no critical habitats within [the] project area,”
- “LDNR conducted a field inspection on October 24, 2018, and found that “[n]o threatened and endangered species and/or sensitive communities were noted at the time of the investigation,”
- FG will limit construction activities in the Mississippi River as much as practicable during the Pallid sturgeon’s breeding season (July-August), and
- as recommended, FG will conduct a nest survey prior to construction activities, and any clearing of trees and brush will be conducted when migratory bird nests are not active, and “will also adhere to the USFWS’s April 11, 2018, guidance regarding application of the Migratory Bird Treaty Act in order to avoid prohibited take.” *Id.*

In addition to this extensive discussion of these nine media, LDEQ incorporated its thorough and detailed assessment of impacts to air quality in Section VI of the BFD. Those analyses have already been discussed at length above.

After incorporating the environmental impacts analysis contained in Sections VI and VII of the BFD, LDEQ balanced that analysis with its analysis of social and economic benefits in Section VIII (the “Cost/Benefit Analysis (Balancing)”), concluding that “LDEQ finds that the

social and economic benefits outweigh the environmental impact costs.” R. Vol. 34, p. 8471.

LDEQ again addressed its balancing determination in its response to public comments, explaining:

As evidenced by the Basis for Decision, LDEQ has conducted a comprehensive examination and analysis of the consequences to the environment. **Adverse environmental impacts will be within allowable federal and state standards and have been avoided to the maximum extent possible, and the positive benefits from the FG LA Complex will far outweigh its negative impacts.**

R. Vol. 35 at p. 8538 (emphasis added).

Thus, The Basis for Decision and Public Comment Response Summary make clear that, directly contrary to Petitioners’ and Alexander’s conclusory allegations, LDEQ’s analysis of the environmental impacts and effects was detailed, thorough, and reasoned, and LDEQ did indeed include these environmental impacts in its overall balancing analysis. LDEQ is entitled to considerable deference in its conclusion that “the social and economic benefits outweigh the environmental impact costs.” R. Vol. 34, p. 8469.

**G. LDEQ did not violate the public trust doctrine by failing to adequately consider the environmental justice effects of the proposed facility.**

Petitioners and Alexander claim numerous alleged “failings” by LDEQ in its environmental justice analysis, arguing that LDEQ violated the public trust doctrine by failing to adequately consider the environmental justice effects of the proposed facility. In particular, they suggest that LDEQ “failed” because it: (1) did not consider the purported disproportionate impact its decision would have on Black and minority members of surrounding communities and ignored the racial makeup of those communities; (2) limited the scope of its alternative site analysis; (3) “misuse[d]” the EJSCREEN and NATA data; (4) “cherry-picked” the data it considered; (5) ignored FG’s emissions; and (6) required FG to comply with actually applicable ambient air standards. The last three of those alleged failings have been addressed above and lack merit for the reasons discussed.<sup>26</sup> FG addresses the first three alleged failings below.<sup>27</sup>

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<sup>26</sup> See *supra* pages 15-24 and 31-32 (NAAQS/Criteria Pollutants); 32-42 (Ethylene Oxide); 44-51 (AAS/Toxic Air Pollutants). See also pages 24-31 (Scope of the Public Trust Doctrine).

<sup>27</sup> Notably, Intervenor Alexander apparently no longer advances her argument (previously raised to this Court in her proposed Affidavit of Kimberly Terrell, Ph.D., the “Director of Community Outreach” at the Tulane Environmental Law Clinic, dated October 6, 2020, which was not accepted by this Court and is not in the administrative record) that LDEQ incorrectly calculated permitted emissions reductions in the area of FG LA’s proposed facility since 2015 because, according to Dr. Terrell, there was actually an increase in permitted emissions. In fact, however, LDEQ’s calculations in its environmental justice analysis are correct, as reflected in the administrative record and discussed above. Simply put, Dr. Terrell’s math and criticisms were wrong.



Yet again, Petitioners and Alexander cite no statute, regulation, or policy mandating that LDEQ conduct an environmental justice assessment at all, much less in the manner urged. As discussed above, there is no applicable constitutional or statutory provision that specifically requires an “environmental justice” analysis at all and/or imposes specific, step-by-step obligations on LDEQ with respect to the issue. Indeed, Petitioners and Alexander predicate their own interpretation of LDEQ’s alleged “environmental justice” obligations on the agency’s general “public trustee” duty. However, the court of appeal, in reversing this Court’s original remand to LDEQ, has already expressly held that this Court “exceeded the statutory authority set forth by the legislature” insofar as it ordered LDEQ to “provide ‘a more thorough environmental justice analysis’” *Rise St. James v. La. Dept. Envtl. Equality*, 2021-0032, 2021 La. App. LEXIS 336, at \*2 (La. App. 1st Cir. 3/5/21).

Nevertheless, as discussed above, LDEQ did, in fact, conduct a detailed environmental justice analysis in its Basis for Decision and, following remand by this Court, Supplemental Basis for Decision. LDEQ’s analysis disproves Petitioners’ and Intervenor’s criticisms. As it constitutes a substantive finding, LDEQ’s more-than-adequate analysis is entitled to deference by this Court.

**1. LDEQ properly considered the existence of any “adverse impact” on the entire community, including Black and minority communities.**

Petitioners argue in cursory fashion that LDEQ failed to “consider the impact of its Decision on minority communities,” “stripp[ed] race from its review” and “ignore[s] race and other demographic data.” Petitioners’ Supplemental Brief, p. 11; Petitioners’ Original Brief, pp. 44-45. Alexander similarly argues without specificity that LDEQ’s “supplemental environmental justice analysis again failed to consider Formosa’s impact on the surrounding communities’ disproportionate pollution burden.” Alexander’s Supplemental Brief, p. 1. These vague criticisms are legally incorrect and, in any event, belied by the record.

As discussed above, in its Basis for Decision, LDEQ undertook an analysis of the environmental justice implications of the proposed project. R. Vol. 34, pp. 8471-8478. The agency began by addressing how EPA has handled environmental justice over the years, beginning with the principle that to be actionable under Title VI, an impact must be both “adverse” and “disparate.” R. Vol. 34, p. 8473. Thus, where there is no adverse impact for anyone living near the facility, “it is unnecessary to reach the question of whether the impacts are ‘disparate.’” *Id.* See also *Sierra Club v. FERC*, 867 F.3d 1357, 1369 (D.C. Cir. 2017) (upholding environmental justice analysis when agency concluded, in part, that “the project would not have a ‘high and adverse’

impact on *any* population, meaning, in the agency's view, that it could not have a 'disproportionately high and adverse' impact on any population, marginalized or otherwise"); *Allen v. Nat'l Institutes of Health*, 974 F. Supp. 2d 18, 47 (D. Mass. 2013) (upholding environmental justice analysis when project was located in area with larger low-income and minority populations, but agency concluded that "the likelihood of [adverse effects] is extremely low"). That is precisely the case here. Because LDEQ found that **no community members** in the vicinity of the proposed facility would suffer **any** adverse health impact, the agency was not required to reach the question of "disproportionate" impact on Black and minority communities. Indeed, as to air quality, LDEQ found that "the analyses conducted in support of the proposed permits show that FG LA will meet the primary and secondary NAAQS and the Louisiana AAS to TAPs and that there are no 'hot spots' over non-industrial properties which are in violation of these standards." R. Vol. 34, p. 8477.<sup>28</sup> Thus, Petitioners' argument is without merit.

Further, Petitioners' argument is factually incorrect because, in addition to the findings noted above, LDEQ specifically and expressly considered, for example, cancer rates in the surrounding community, including how they affect its Black and minority members. Specifically, in response to Comment No. 86, LDEQ explained in detail that:

Further, as recognized by the commenter, data from the Louisiana Tumor Registry shows that in the so-called "Industrial Corridor," which includes the parishes of Ascension, East Baton Rouge, Iberville, St. Charles, St. James, St. John the Baptist, and West Baton Rouge, the incidence rates in all cancers combined for white women are significantly lower than the statewide rate, and the rates for all cancers combined for white men, black men, and black women do not differ significantly from Louisiana rates. Death rates for all cancers combined in the Industrial Corridor are significantly lower than those elsewhere in Louisiana among whites: blacks experience the same mortality rates as their counterparts statewide.

Despite the Louisiana Tumor Registry's findings, the commenter alleges that cancer incidence rates in St. James Parish are "significantly higher than in the rest of Louisiana." That is simply not the case. In fact, the cancer rates in St. James Parish were not even the highest in the Industrial Corridor for black men or black women, and another study even represents the cumulative cancer risk from all air toxics in the parish as "low."

In St. James Parish, the incidence rates for the ten most commonly diagnosed cancers in Louisiana were slightly higher (8 percent) than Louisiana averages for black women (447.7 v. 415.4 per 100,000), but markedly lower for black men (555.7 v. 592.0 per 100,000). Notably, these rates were below those observed in 19 other parishes for black women and in 45 other parishes for black men, including parishes with little to no industrial activity...

R. Vol. 35, p. 8544-8545. Further, in response to Comment No. 138, LDEQ explained:

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<sup>28</sup> As discussed above, NAAQS are established at levels which are protective of human health and the environment with an adequate margin of safety. AAS are risk-based standards.



The FG LA Complex will be over a mile from the nearest community on the west side of the river. Further, as explained in Section IX of the Basis for Decision, the population density within one mile of FG LA's property boundary (in any direction) is only 10 people per square mile per EJSCREEN data. In fact, EJSCREEN reports the population within a one-mile radius from the center of the facility to be zero.

R. Vol. 35, p. 8582.

**2. LDEQ did not arbitrarily limit the scope of its alternative sites analysis.**

Petitioners also argue that LDEQ failed to consider minority communities by “allow[ing] Formosa Plastics to limit its search” for alternative sites to a small geographic region (Ascension, St. James, and St. John parishes).” Petitioners’ Original Brief, p. 45 (citing *In re Browning-Ferris Indus. Petit Bois Landfill*, 93-2050 (La. App. 1st Cir. 6/23/95), 657 So. 2d 633, 639).

However, LDEQ’s alternative site analysis was not arbitrarily limited in scope. In *Save Our Hills*, the first circuit discussed the alternatives analysis as follows:

There is no precise means for determining the sufficiency of an alternate site analysis. Due consideration must be given to alternative sites from an environmental standpoint, not just business and economic concerns. The alternative site study must be sufficient to allow LDEQ to fully consider and thereafter make an informed determination that the site proposed affords the best balance of environmental costs versus economic, technical or social benefits. A court can look at the criteria used by the applicant to evaluate the alternative sites.

*Save Our Hills*, 266 So. 3d at 933 (internal citations omitted) (reversing district court’s judgment vacating air permit for a gravel and sand mining operation after finding “the evidence as reasonably interpreted supports the determination of LDEQ as there is an absence of a clear showing that the issuance of the air permit to Southern Aggregates was arbitrary and capricious.”). *See also Browning-Ferris*, 657 So. 2d at 639 (“we are aware of no precise means for determining the sufficiency of an alternate sites analysis.”).

Here, the evidence strongly supports the determination of LDEQ in its alternative site analysis. As LDEQ described at length in its Basis for Decision, initially FG identified a number of suitable industrial-zoned properties, each of which was considered in conjunction with the following environmental and logistical factors: (1) attainment status with respect to criteria pollutants; (2) access to an adequate dock (or ability to construct one); (3) rail access; (4) access to ethylene, ethane, and natural gas pipelines; (5) access to 230-kilovolt transmission lines; (6) amount of jurisdictional wetlands on the property; (7); amount and location of the land within the 100-year floodplain; (8) proximity of the property to residences; and (9) availability of at least 800 acres. R. Vol. 34, p. 8442. Six properties were initially identified, and the Zeringue/St. Emma site was chosen. *Id.* However, that site was thereafter eliminated because the New Orleans-Baton

Rouge Steamship Pilots Association would not grant its approval because a dock constructed at the proposed location would make negotiating a bend in the river unacceptably dangerous. *Id.*

Eight additional sites were thereafter identified and considered along with the five remaining properties from the initial effort, for a total of thirteen properties located in three parishes (Ascension, St. James, and St. John the Baptist). R. Vol. 34, p. 8443. The five Ascension Parish properties were eliminated because the attainment status of that parish would have “effectively precluded” construction of the facility there given the requirement to offset certain emissions. *Id.* The remaining properties were analyzed using a scoring system that encompassed several criteria. Several were less positive because of the proximity of residential areas and/or the size/configuration of the property. *Id.* Two properties had more positive characteristics and few negative ones. Those properties were combined into the Mosaic-Gavilon site, which was ultimately selected by FG because it: (1) is located in an attainment area with respect to all National Ambient Air Quality Standards; (2) provides riverfront access for construction of a dock that will not obstruct navigation; (3) is traversed by a railroad track, 230-volt transmission lines, and ethane and natural gas pipelines; (4) contains a minimal amount of jurisdictional wetlands in the construction area; (5) is mostly located outside of the 100-year floodplain; (6) is sufficiently far from the nearest residential communities and in an area of low population density; (7) is large enough to allow for a 300-foot buffer between process equipment and the property boundary; and (8) is located in an area specifically designated for industrial development and adjacent to other industrial properties. R. Vol. 34, p. 8444. LDEQ further noted that the low levels of contamination at the site (due to prior agricultural and oil and gas production activities) do not pose a risk to human health and the environment. *Id.* Based on all of these factors, LDEQ found that “there are no alternative sites that would offer more protection to the environment than the proposed site without unduly curtailing environmental benefits.” *Id.*

For the above reasons, LDEQ’s alternative site analysis was not arbitrary and capricious. It was reasoned and detailed. Petitioners and Alexander have not demonstrated otherwise.

**3. LDEQ did not “misuse” the EJSCREEN and NATA data.**

Petitioners and Alexander argue in their Supplemental Briefs that LDEQ “misuses” EJSCREEN by “cherry picking” values therefrom and failed to “rationally assess” the 2014 NATA data. Petitioners’ Supplemental Brief, pp. 2, 12-18; Alexander’s Supplemental Brief, pp. 10-13.



Once again, the record contradicts their criticisms. LDEQ's analysis clearly was **not** taken "without reason."

As discussed above, LDEQ thoroughly addressed and considered EJSCREEN data in its original and supplemental BFD. In its original BFD, LDEQ found that the EJSCREEN data "shows that residents of the community closest to the FG LA Complex do *not* bear a disproportionate share of the negative environmental consequences resulting from industrial operations. In fact, the environmental indicators of Particulate Matter, Ozone, NATA Air Toxics Cancer Risk, and NATA Respiratory Hazard Index are comparable with or *less* than state averages." R. Vol. 34, p. 8475.

Importantly, LDEQ also explained the limitations of use of the EPA's EJSCREEN website in an environmental justice analysis, as follows (*see* R. Vol 34, pp. 8453-8454):

- LDEQ critiqued the use of the EJScreen in this context because "the EPA cautions that EJSCREEN should **not** be used" (a) "as a means to identify or label an area as an "EJ community," (b) "to quantify specific risk values for a selected areas," (c) "to measure cumulative impacts of multiple environmental factors," or (d) "as a basis for agency decision-making or making a determination regarding the existence or absence of EJ concerns." R. Vol. 34, p. 8475 (emphasis added) (citing <https://www.epa.gov/ejscreen/how-does-epa-use-ejscreen>).
- LDEQ stated the screening-level results: (a) do not, by themselves, determine the existence or absence of environmental justice concerns in a given location; (b) do not provide a risk assessment; and (c) have other significant limitations. R. Vol. 34, p. 8475 (citing <https://www.epa.gov/ejscreen/purposes-and-uses-ejscreen>).
- LDEQ also warned, as the EPA has warned, that "users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas." R. Vol. 34, p. 8542.
- LDEQ instead used the Louisiana Tumor Registry's actual, on-the-ground assessment of cancer risk in the area (R. Vol. 34, p. 8453) and rejected various commenters' attacks on the Louisiana Tumor Registry's data.

LDEQ further "evaluated whether the net effect of individual permitting decisions has, over time, increased the burden on the residents of St. James Parish," finding "dramatic declines in [Toxic Release Inventory emissions, criteria pollutants, and TAPs] over both timeframes

evaluated.” R. Vol. 34, pp. 8476-8477. LDEQ also found a decrease of emissions from all major sources within five miles of the proposed complex in the amount of 33,000 tons since 2015. R. Vol. 34, p. 8477. Concluding its original environmental justice analysis, LDEQ stated:

As noted in Section VI, the analyses conducted in support of the proposed permits show that FG LA will meet the primary and secondary NAAQS and the Louisiana AAS for TAPs and that there are no “hot spots” over non-industrial properties which are in violation of these standards. EPA’s own EJSCREEN data shows that the environmental indicators of Particulate Matter, Ozone, NATA Air Toxics Cancer Risk, and NATA Respiratory Hazard Index are comparable or less than state averages. Actual emissions of both criteria pollutants and TAPs as well as TRI releases have decreased dramatically over time. Permitted emissions from major sources located near the FG LA Complex have also declined significantly.

Finally, it is clear that LDEQ provided an opportunity for all parties to be meaningfully involved in the permit process. For example, LDEQ provided a lengthy comment period (2.5 times longer than required by applicable regulations) and a public hearing on the proposed permits, and as evidenced by the Public Comment Response Summary, LDEQ has carefully considered the community’s concerns in the decision making process.

R. Vol. 34, pp. 8477-8478. *See also* R. Vol. 35, pp. 8542-8546 (public comment responses addressing environmental justice).

On remand, LDEQ addressed the fact that “based on the results of the 2014 National Air Toxics Assessment (NATA), the NATA Cancer risk for the area . . . increase[d].” R. Vol. 34, p. 8963. Specifically, the agency found that “[w]hile this value did increase relative to the state average, this change does not represent a statistically significant increase in the overall cancer risk to those living in the vicinity of the FG LA Complex.” *Id.* In particular, LDEQ reasoned, even with the increased cancer rate (.06 cases per million, up from .04 per million), it would take the entire population of St. James and St. John the Baptist combined for one additional case of cancer to result. *See id.*

LDEQ further noted that the NATA Cancer Risk value “overestimates actual cancer risk” because: (1) EPA’s assumed exposure scenario does not reflect real world conditions in that it assumes continuous 24-hour per day exposure for 70 years; and (2) reported emissions for chloroprene and ethylene oxide, the compounds contributing to most of the risk, have “declined significantly since 2014” based upon post-2014 emissions data. R. Vol. 34 p. 8964. As to the former, LDEQ reasoned “[t]hat any person would be continuously exposed to the concentrations of pollutants modeled by EPA to estimate cancer risk for the area for 70 years is simply not realistic. *Id.*

Thus, LDEQ concluded that:



the 2014 NATA data does not materially change the results of the impact of the FG LA Complex on human health and the environment. The NATA Cancer Risk value is based on a dated emissions inventory which fails to account for the recent and substantial reductions in emissions of the compounds which EPA asserts contribute “to most of the risk” and grossly overestimates public exposure to all carcinogenic pollutants.

For these reasons, LDEQ reaffirms that the social and economic benefits of the proposed project will greatly outweigh its adverse environmental benefits.

R. Vol. 34, p. 8965.

Moreover, no matter the precise figure, LDEQ has determined that the EJSCREEN data remain unsuitable for the use to which Petitioners are trying to put them—*i.e.*, to quantify specific risk values for a selected area and as a basis for agency decision-making regarding the existence or absence of environmental justice concerns.

Finally, LDEQ’s reasoning against the use of the EJSCREEN for the purposes urged by Petitioners and Alexander are in accord with both the EPA’s own warnings. EPA gives similar warnings about use of the underlying NATA information. As the United States District Court for the Eastern District of Louisiana has noted, the EPA expressly disclaims the regulatory or enforcement value of the 2014 NATA data:

[T]he EPA warns against using NATA results as an absolute risk measure, cautioning that “NATA is a screening tool, not a refined assessment. It shouldn’t be used as the sole source of information to regulate sources or enforce existing air quality rules,” and it “wasn’t designed as a final means to pinpoint specific risk values at local levels. The results are best used as a tool to help learn which pollutants, types of emissions sources and places should be studied further.” NATA results are not appropriate “to determine exactly how many people are exposed to precise levels of risk or if a certain area is ‘safe’ or not.” “[Y]ou should avoid using NATA results as an absolute measure of your risk from air toxics.”

*Butler v. Denka Performance Elastomer, LLC*, No. 18-6685, 2020 U.S. Dist. LEXIS 91998, at \*30-31 (E.D. La. May 27, 2020) (quoting <https://www.epa.gov/national-air-toxics-assessment/nata-frequent-questions#background4>, 2, 5, and 3), *aff’d in part and rev’d in part on other grounds*, No. 20-30365, 2021 U.S. App. LEXIS 31171 (5th Cir. Oct. 15, 2021).

For all of these reasons, LDEQ’s thorough and detailed analysis of the EJSCREEN data in its original BFD and supplemental BFD is the opposite of arbitrary and capricious. Petitioners and Alexander have not demonstrated otherwise.

## CONCLUSION

LDEQ properly issued the air quality permits at issue after careful and appropriate consideration of the requirements of the Clean Air Act and public trust doctrine. The present

judicial review action is premised largely upon arguments that ask this Court to stretch the public trust doctrine far beyond its proper bounds. LDEQ did all that it was required to do under the applicable constitutional, statutory, and regulatory provisions, and its issuance of the permits should be affirmed because it was neither arbitrary, capricious, and/or outside of the latitude of discretion afforded by the public trust doctrine.

Respectfully submitted:

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#### CERTIFICATE OF SERVICE

I hereby certify that a copy of the above and foregoing has been served on all counsel of record by email and/or by placing the same in the United States Mail, properly addressed and with first class postage prepaid, this 6th day of December, 2021.

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JAMES C. PERCY



# APPENDIX A

## APPENDIX A

This Appendix is provided in response to the Court’s request for a list and explanation of the various permits issued by LDEQ to FG. Although the Court later decided that there was no need for such a list and explanation, FG is providing the requested information.

Based on LDEQ’s review and consideration of the permit applications, the original and supplemental Environmental Assessment Statements, and the public comments submitted in support and opposition, LDEQ issued a Prevention of Significant Deterioration (PSD) permit and fourteen Title V permits. These permits are explained in greater detail below.

LDEQ issued the following permits:

Permit	Number	Record Citation
PSD Permit	PSD-LA-812	R. Vol. 34, pp. 8311-8436
Ethylene 1	3141-V0	R. Vol. 33, pp. 8150-8216
Ethylene Glycol 1	3142-V0	R. Vol. 33, p. 8102-8149
High Density Polyethylene 1	3143-V0	R. Vol. 33, pp. 8043-8101
Linear Low Density Polyethylene	3144-V0	R. Vol. 32, p. 7985 to R. Vol. 33, p. 8042
Ethylene 2	3150-V0	R. Vol. 31, p. 7777 to R. Vol. 32, p. 7845
Ethylene Glycol 2	3151-V0	R. Vol. 31, pp. 7732-7776
High Density Polyethylene 2	3152-V0	R. Vol. 31, pp. 7670-7731
Low Density Polyethylene	3153-V0	R. Vol. 31, pp. 7616-7669
Propylene	3145-V0	R. Vol. 32, pp. 7921-7984
Polypropylene	3146-V0	R. Vol. 32, pp. 7867-7920
Utilities 1	3148-V0	R. Vol. 33, p. 8274 to R. Vol. 34, p. 8310
Utilities 2	3154-V0	R. Vol. 31, pp. 7569-7615
Central Wastewater Treatment	3149-V0	R. Vol. 32, pp. 7846-7866
Logistics	3147-V0	R. Vol. 33, pp. 8217-8273

### A. PSD Permit and Title V Permits

Major sources within attainment areas must obtain a Prevention of Significant Deterioration (PSD) permit prior to beginning construction of the facility. 42 U.S.C. § 7475(a); LAC 33:III.509.A.1 and A.3. As such, a PSD permit is an authorization to construct the proposed facility. A PSD permit is issued only after the applicant demonstrates that emissions from the facility and emissions from the surrounding area will not cause or contribute to a violation of any national ambient air quality standard. Further, the PSD permit must require compliance with emission standards and standards of performance set forth in federal regulations, such as 40 CFR Parts 60 and 61, and must apply the Best Available Control Technology (BACT). LAC 33:III.509.J.1, J.2, and K.1.

All major sources “shall have a permit to operate.” 40 CFR § 70.1(b). Thus, the Title V permit program relates the operation of a facility and is regarded as an “operating” permit, which means that the Title V permit regulates the operation of the facility and the individual emission units within the facility. The Title V permit must incorporate all federally applicable requirements for each emissions unit at the source. LAC 33:III.507.A.3.

Title V is a reference to Clean Air Act Chapter 85, Subchapter V, found at 42 U.S.C. § 7661-7661f. The regulations governing operating permits are found in 40 CR Part 70. *See* 40 CFR § 70.1(a): “The regulations in this part provide for the establishment of comprehensive State air quality permitting systems consistent with the requirements of title V of the Clean Air Act.” LDEQ regulations provide that obtaining a permit in accordance with LAC 33:III.507, the Part 70 Operating Permits Program, fulfills the obligation to have a permit under Title V and 40 CFR Part 70.” LAC 33:III.507.B.1. The terms “Title V permit” and “Part 70 permit” are generally used interchangeably.

As to the fourteen Title V permits, LDEQ could have issued a single Title V Permit for all of the plants and units within the Facility. *See* LAC 33:III.501.C.9 (“When a single site includes more than one process, a single permit may be issued to include all processes at the site. Conversely, multiple permits may be issued each of which may address one or more processes at the site.”). As set forth by LDEQ in the Public Comment Response Summary, the practice of issuing multiple permits for a single source or facility is common. R. Vol. 35, p. 8578.

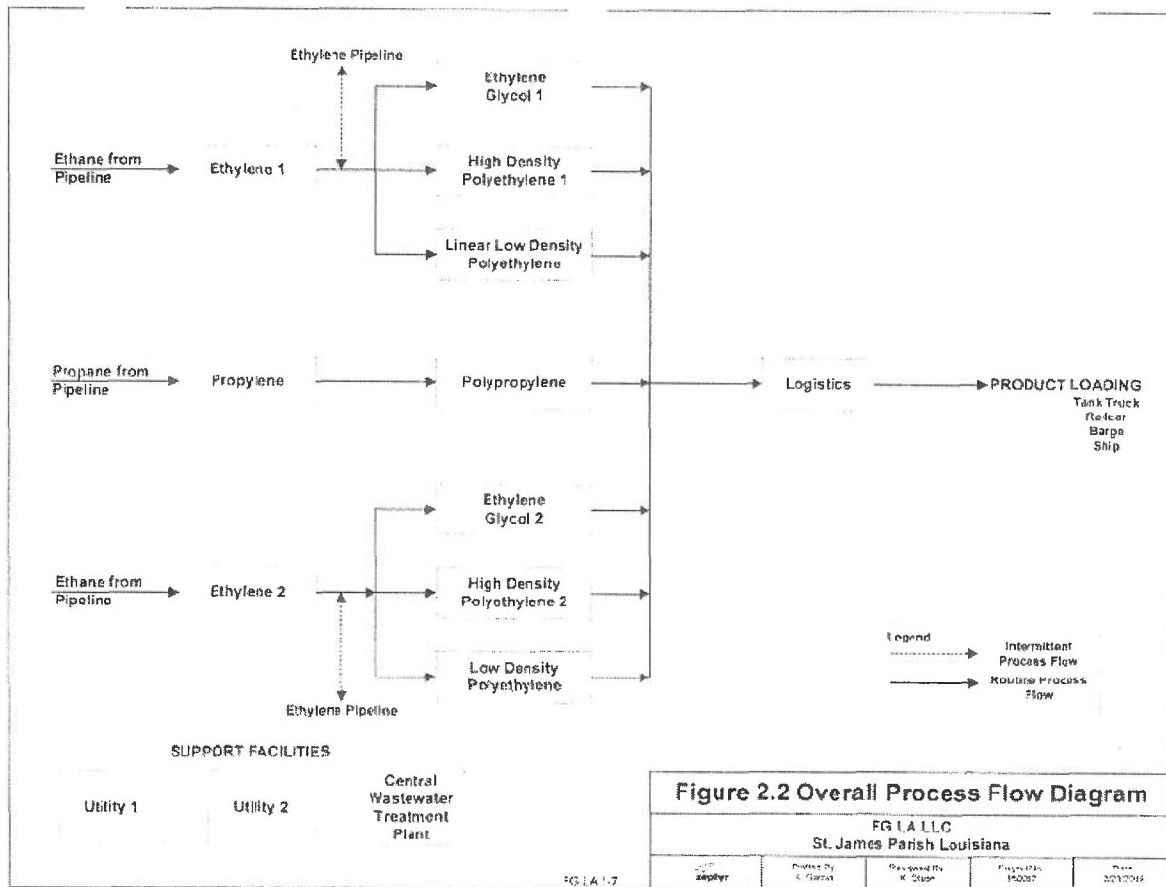


**B. Overall Process**

An overall process diagram was included in the PSD Permit Application. See Figure A-1. As can be seen, there are three production trains based on the use of ethane and propane. The second production train based on the use of ethane (which is Phase II) is similar to the first train, with one exception. There are also four facilities supporting the three production trains. An overall process description is found in Section 2.2 of the PSD Permit Application. R. Vol. 8, pp. 1923-1924.

**Figure A-1**

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Source: PSD Permit Application, Figure 2.2 at R. Vol. 8, p. 1927.

**C. Discussion of Permits**

**1. PSD Permit**

The PSD Permit issued to FG “approve[d] construction of the FG LA Complex . . . subject to the maximum allowable emissions rates and specific conditions established herein.” R. Vol. 34, p. 8317. The PSD Permit encompasses the entire facility. It requires the use of the Best Available Control Technology (BACT) to control emissions and reviews the comprehensive ambient air quality analysis performed by FG.

The PSD Permit sets maximum allowable emission rates for emission sources. R. Vol. 34, pp. 8396-8436. The PSD Permit also includes Specific Conditions, which mandate, among other things, good combustion practices, continuous emissions monitoring systems, stack tests, and other emissions monitoring. R. Vol. 34, pp. 8387-8395.

Updated Application <sup>1</sup>: R. Vol. 8, p. 1914 – R. Vol. 9, p. 2238  
 General Description of Process: R. Vol. 8, pp. 1923-1924; R. Vol. 34, p. 8314-8316  
 Process Flow Diagram: R. Vol. 8, p. 1927  
 Permit: R. Vol. 34, pp. 8311-8436

<sup>1</sup> Please note that the administrative record contains additional information submitted by FG to LDEQ as to each process. The updated application is cited because it contains the process descriptions.

## **2. Train 1 – Ethane**

Train 1 consists of four plants or processes: Ethylene 1, Ethylene Glycol 1, High Density Polyethylene 1, and Linear Low Density Polyethylene.

In general terms, ethane is obtained from off-site sources and is received by pipeline. Recycled ethane may also be used. Ethane is sent for thermal cracking, which produces ethylene. Although some ethylene may be sold (depending on the volume produced), it will generally proceed to the other three plants for processing into ethylene glycol, high density polyethylene (HDPE), or linear low density polyethylene (LLDPE).

In the Ethylene Glycol 1 Plant, the ethylene is used to create three types of ethylene glycol: monoethylene glycol solution (MEG), diethylene glycol (DEG), and polyethylene glycol (PEG). In the HDPE and LLDPE plants, the ethylene undergoes polymerization to produce HDPE and LLDPE in pellet form, which can be shipped off-site for processing into various products.

### **Ethylene 1:**

Updated Application: R. Vol. 5, pp. 1011-1224

General Description of Process: R. Vol. 5, pp. 1021-1024; R. Vol. 33, p. 8152-8155

Process Flow Diagram: R. Vol. 5, p. 1025

Permit: R. Vol. 33, pp. 8150-8216

### **Ethylene Glycol 1:**

Updated Application: R. Vol. 3, pp. 638-745

General Description of Process: R. Vol. 3, pp. 648-651; R. Vol. 33, p. 8104-8107

Process Flow Diagram: R. Vol. 3, p. 652

Permit: R. Vol. 33, p. 8102-8149

### **High Density Polyethylene 1:**

Updated Application: R. Vol. 2, p. 480 to R. Vol. 3, p. 637

General Description of Process: R. Vol. 2, pp. 489-492; R. Vol. 33, pp. 8045-8048

Process Flow Diagram: R. Vol. 2, p. 493

Permit: R. Vol. 33, pp. 8043-8101

### **Linear Low Density Polyethylene:**

Updated Application: R. Vol. 1, pp. 9-159

General Description of Process: R. Vol. 1, pp. 17-20; R. Vol. 32, pp. 7987-7989

Process Flow Diagram: R. Vol. 1, p. 21

Permit: R. Vol. 32, p. 7985 to R. Vol. 33, p. 8042

## **3. Train 2 – Ethane**

This train consists of four plants or processes: Ethylene 2, Ethylene Glycol 2, High Density Polyethylene 2, and Low Density Polyethylene. Train 2 is similar to Train 1, except that Train 2 includes a Low Density Polyethylene (LDPE) Plant.

### **Ethylene 2:**

Updated Application: R. Vol. 7, pp. 1518-1731

General Description of Process: R. Vol. 7, pp. 1528-1531; R. Vol. 31, p. 7779 to R. Vol. 32, p. 7782

Process Flow Diagram: R. Vol. 7, p. 1532

Permit: R. Vol. 31, p. 7777 to R. Vol. 32, p. 7845



### **Ethylene Glycol 2:**

Updated Application: R. Vol. 3, p. 746 to R. Vol. 4, p. 851  
General Description of Process: R. Vol. 4, pp. 756-759; R. Vol. 31, pp. 7734-7737  
Process Flow Diagram: R. Vol. 4, p. 760  
Permit: R. Vol. 31, pp. 7732-7776

### **High Density Polyethylene 2:**

Updated Application: R. Vol. 4, p. 852 to R. Vol. 5, p. 1010  
General Description of Process: R. Vol. 4, pp. 862-865; R. Vol. 31, pp. 7672-7675  
Process Flow Diagram: R. Vol. 4, p. 866  
Permit: R. Vol. 31, pp. 7670-7731

### **Low Density Polyethylene:**

Updated Application: R. Vol. 2, pp. 316 - 477  
General Description of Process: R. Vol. 2, pp. 324-327; R. Vol. 31, pp. 7618-7621  
Process Flow Diagram: R. Vol. 2, pp. 328  
Permit: R. Vol. 31, pp. 7616-7669

## **4. Train 3 – Propane**

This train consists of two plants or processes: Propylene and Polypropylene.

Propane is obtained from off-site sources and is received by pipeline. Recycled propane may also be used. Propane is sent to reactors to create propylene. The propylene then undergoes polymerization to produce polypropylene. The polypropylene is in pellet form and can be shipped off-site for processing into various products.

### **Propylene:**

Updated Application: R. Vol. 5, p. 1225 to R. Vol. 6, p. 1382  
General Description of Process: R. Vol. 5, pp. 1235-1239; R. Vol. 32, pp. 7923-7927  
Process Flow Diagram: R. Vol. 5, p. 1240  
Permit: R. Vol. 32, pp. 7921-7984

### **Polypropylene:**

Updated Application: R. Vol. 1, p. 160 to R. Vol. 2, p. 315  
General Description of Process: R. Vol. 1, p. 168-170; R. Vol. 32, pp. 7869-7871  
Process Flow Diagram: R. Vol. 1, p. 171  
Permit: R. Vol. 32, pp. 7867-7920

## **5. Support Facilities**

The support facilities consist of Utilities 1, Utilities 2, Central Wastewater, and Logistics. Utilities 1 and 2 provide steam and electricity. Central Wastewater treats wastewater prior to discharge pursuant to a separate water discharge permit. Logistics provides storage and loading services and includes storage tanks and equipment to facilitate tank, rail, ship, and barge loading.

### **Utilities 1:**

Updated Application: R. Vol. 9, p. 2239 to R. Vol. 10, p. 2348  
General Description of Process: R. Vol. 9, pp. 2249-2250; R. Vol. 33, pp. 8276-8277  
Process Flow Diagram: R. Vol. 9, p. 2251  
Permit: R. Vol. 33, p. 8274 to R. Vol. 34, p. 8310

**Utilities 2:**

Updated Application: R. Vol. 8, pp. 1801-1913

General Description of Process: R. Vol. 8, pp. 1811-1812; R. Vol. 31, pp. 7571-7572

Process Flow Diagram: R. Vol. 8, p. 1813

Permit: R. Vol. 31, pp. 7569-7615

**Central Wastewater:**

Updated Application: R. Vol. 7, p. 1732 to R. Vol. 8, p. 1800

General Description of Process: R. Vol. 7, pp. 1742-1748

Process Flow Diagram: R. Vol. 7, p. 1750

Permit: R. Vol. 32, pp. 7846-7866

**Logistics:**

Updated Application: R. Vol. 6, p. 1382 to R. Vol. 7, p. 1517

General Description of Process: R. Vol. 6, pp. 1393-1395; R. Vol. 33, p. 8219-8221

Process Flow Diagram: R. Vol. 6, p. 1396

Permit: R. Vol. 33, p. 8217-8273

# APPENDIX B



## APPENDIX B

Petitioners claim that the “modeling shows that ethylene oxide concentrations beyond the edge of the site reach as high as 0.41 ug/m<sup>3</sup>.” Petitioners’ Original Brief, pp. 39-40. The value of 0.41 ug/m<sup>3</sup> was derived from the Updated TAPs Modeling Analysis for Ethylene Oxide and Ethylene Glycol submitted to LDEQ on December 11, 2018. R. Vol. 19, pp. 4533-4545.

The location of the maximum modeled ground level annual concentration of 0.41 ug/m<sup>3</sup> of ethylene oxide is included in the electronic files submitted in the Updated TAPs Modeling Analysis. R. Vol. 19, pp. 4534-4545; Stipulation Regarding Administrative Record, No. 5 (EDMS #11431688). In the electronic files, the location is noted as 700885.80/3327709.30. *See* Figure B-1. When converted to latitude and longitude coordinates for use in Google Earth, the coordinates are 30.064014/-90.916044. *See* Figure B-2. Figure B-2 establishes that the maximum modeled ground level concentration of 0.41 ug/m<sup>3</sup> is on the western property boundary.

**Figure B-1**

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***							
** CONC OF EO IN MICROGRAMS/M**3 **							
GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID			
ALL	1ST HIGHEST VALUE IS	0.41358 AT ( 700885.80, 3327709.30,	4.26,	4.26,	0.00)	DC	
	2ND HIGHEST VALUE IS	0.38828 AT ( 700827.50, 3327634.50,	4.08,	4.08,	0.00)	DC	
	3RD HIGHEST VALUE IS	0.35885 AT ( 700800.00, 3327600.00,	4.01,	4.01,	0.00)	DC	
	4TH HIGHEST VALUE IS	0.35747 AT ( 700798.40, 3327597.30,	3.99,	3.99,	0.00)	DC	
	5TH HIGHEST VALUE IS	0.35400 AT ( 700944.00, 3327784.00,	4.35,	4.35,	0.00)	DC	
	6TH HIGHEST VALUE IS	0.30343 AT ( 700900.00, 3327800.00,	4.34,	4.34,	0.00)	DC	
	7TH HIGHEST VALUE IS	0.30092 AT ( 700739.50, 3327521.80,	3.90,	3.90,	0.00)	DC	
	8TH HIGHEST VALUE IS	0.28884 AT ( 700800.00, 3327700.00,	4.21,	4.21,	0.00)	DC	
	9TH HIGHEST VALUE IS	0.28037 AT ( 701002.30, 3327858.70,	4.47,	4.47,	0.00)	DC	
	10TH HIGHEST VALUE IS	0.27162 AT ( 701564.00, 3327157.00,	4.30,	4.30,	0.00)	DC	

**Figure B-2**

