



Koch Methanol St. James
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SUBMITTED VIA EMAIL

September 14, 2023

Department of Environmental Quality
Office of Environmental Services
Public Participation and Permit Support Division
Public Participation Group
deq.publicnotices@la.gov

**RE: Koch Methanol St. James, LLC
Koch Methanol Facility
Comments Regarding Proposed Part 70 Air Operating Significant Permit Modification
and Initial Prevention of Significant Deterioration (PSD) Permit and the Associated
Environmental Assessment Statement
AI No. 194165
Permit Nos. 2560-00295-V6 and PSD-LA-851
Activity Nos. PER20220006 and PER20220007**

Dear Sir or Madam:

Koch Methanol St. James, LLC (Koch) is submitting the enclosed comments in support of the above referenced Proposed Part 70 Air Operating Significant Permit Modification and Initial Prevention of Significant Deterioration (PSD) Permit, and the associated Environmental Assessment Statement (EAS). The purpose of these comments is to provide the results of Koch's review of the environmental justice (EJ) assessment included in the previously submitted EAS to reflect the update of EJScreen to version 2.2. As noted in the enclosed comments, following review and assessment of the EJScreen version 2.2 results, the conclusions presented in the previously submitted EAS remain unchanged. Specifically, the EJ analysis continues to demonstrate that the proposed Project will not result in adverse impacts either directly or cumulatively considering existing conditions surrounding the KMe Facility. Accordingly, it also demonstrates that the proposed Project will not cause disproportionate impacts (adverse impacts borne disproportionately on the basis of race, color, or national origin).

Thank you for the opportunity to submit comments. If you have questions, I can be contacted at (580) 478-7621, or Kevan.Reardon@kochind.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kevan Reardon", written over a light blue horizontal line.

Kevan Reardon
EH&S and Security Leader

Enclosure

cc: Mr. Anthony Randall, LDEQ

1 INTRODUCTION

The environmental justice (EJ) assessment included in Koch Methanol St. James, LLC's (Koch's) June 19, 2023, Environmental Assessment Statement (EAS) utilized EJScreen version 2.1. EPA updated EJScreen shortly thereafter, on June 26, 2023, with the release of EJScreen version 2.2. In response to this update, Koch reviewed the screening results for the area within a 3.1 mile (5 kilometer) ring centered around the KMe Facility (the study area) using EJScreen version 2.2 and determined that the conclusions reached in the EJ assessment included in the June 19, 2023, EAS are not impacted by the update to EJScreen from version 2.1 to 2.2.

Additionally, during this review, KMe identified a few minor updates needed to clarify information in Tables D-10 to D-13, which were included in Sections 2.11.3.1.1 and 2.11.3.1.2 of the June 19, 2023, EAS. None of these updates change the conclusions for these sections. Additional detail is provided in Section 3.5 of this document.

2 EJSCREEN VERSION 2.2 UPDATES

EPA occasionally updates EJScreen, often drawing from updated environmental and socioeconomic data, and implementing methodological or computational updates to the tool. The most recent installment, version 2.2, was released by EPA on June 26, 2023, and introduces updated data source years for multiple environmental indicators, modified methodology, and a new environmental indicator and EJ index,¹ summarized briefly here:

Updated Source Data. Source data for several indicators were updated to reflect more recent years than in previous versions of the screening tool. For instance, data for particulate matter air concentrations for the particle size fraction less than 2.5 micrometers (μm) in diameter ($\text{PM}_{2.5}$) now includes data² collected in 2019 (previously 2018). Additional indicators with data upgraded to more recent years include Air Toxics Cancer Risk, Air Toxics Respiratory Hazard Index (HI), Diesel Particulate Matter (DPM), Lead Paint, Ozone, Risk Management Plan (RMP) Facility Proximity, and Wastewater Discharge.

Demographic and Census Data. All demographic indicators and Census data (i.e., low-income, people of color, population size) now incorporate data from the Census Bureau's American Community Survey (ACS) 2017-2021 5-year summary (previously 2016-2020).

New Methodology for Ozone Indicator. In addition to the use of updated source data, the methodology for calculating the ozone indicator was updated. Previous versions of EJScreen incorporated the summer seasonal average of daily maximum

¹ EPA. 2023. EJScreen Change Log. Available at <https://www.epa.gov/ejscreen/ejscreen-change-log#junenew>

² $\text{PM}_{2.5}$ data in EJScreen are sourced from modeled and monitored air data provided by EPA'S Office of Air and Radiation.

8-hour ozone concentrations. Version 2.2 replaced the summer seasonal ozone concentrations with the annual average of the top ten daily maximum 8-hour ozone concentrations. EPA modified the methodology with the intent to better represent the ozone National Ambient Air Quality Standards (NAAQS) attainment status while also identifying areas with peak ozone concentrations.

New Indicator. The previous version of EJScreen (version 2.1) included 12 environmental indicators. A new, 13th environmental indicator, Toxics Releases to Air, was introduced in version 2.2. This new indicator uses toxicity-weighted concentrations from the 2021 Risk-Screening Environmental Indicators (RSEI) model to quantify potential human health impacts from toxic chemicals released by facilities participating in EPA's Toxics Release Inventory (TRI) Program.³

3 ENVIRONMENTAL JUSTICE ASSESSMENT FOR THE KME FACILITY

The EJ assessment for the KMe Facility presented in the June 19, 2023, EAS utilized the results of EJScreen version 2.1 to identify potential baseline environmental concerns present in the community that warrant additional review and guide further assessment of whether the KMe Facility might contribute to adverse and disproportionate impacts. EJScreen version 2.1 calculated 12 "Environmental Justice Indexes (EJ Indexes)," one for each of 12 individual environmental indicators, where the EJ Index⁴ is a percentile ranking among two comparison populations: state and US. The recent June 26, 2023, update of EJScreen now includes 13 EJ Indexes, which are provided within a Community Report (the Community Report for the KMe Facility study area is included as Attachment A) exportable from the tool.

EPA's June 26, 2023, update of EJScreen prompted Koch to perform additional review of the environmental impacts within the study area. The following sections summarize the conclusions from the previous EJ assessment, changes to environmental and socioeconomic indicator results for the study area based on EJScreen version 2.2, and implications, if any, of the changes in EJScreen results for the KMe Facility study area.

3.1 KMe EJ Assessment Summary (June 19, 2023 EAS)

In the prior EJ Assessment, and as recommended by EPA and LDEQ guidance, EJ Indexes that were at or above the 80th percentile in EJScreen Version 2.1 were reviewed to assess the need for further evaluation. As shown in Table 1, the June 19, 2023, submittal found that 7 out of 12 EJ Indexes reported state and/or US percentiles equal to or greater than the 80th percentile for the study area, including: 2017 Air Toxics Cancer Risk, Air Toxics Respiratory HI, DPM, Lead Paint, PM_{2.5}, RMP

³ US Environmental Protection Agency (EPA). EJScreen Technical Documentation for Version 2.2, July 2023.

⁴ An EJ Index is comprised of the environmental indicator percentile for a census block group and a demographic index (average of percent low-income population and percent people of color) for a census block group.

Facility Proximity, and Wastewater Discharge. Discussion of these seven EJ Indexes is provided in Section 2.11.3 of the June 19, 2023, EAS.

Analysis of the environmental indicator data and potential for the KMe Facility-specific operations to contribute to environmental impacts specific to the seven EJ Indexes found that the facility will not result in adverse impacts either directly or cumulatively. The EJ assessment also demonstrated that the proposed Project will not cause disproportionate adverse environmental impacts on communities with environmental justice concerns. Details regarding the EJ assessment methods, results, and conclusions are provided in Section 2.11 of the June 19, 2023, EAS.

3.2 Updated EJScreen Results (version 2.2)

EJ Indexes equal to or greater than the 80th percentile, when compared with state or US populations, are highlighted in this analysis. Table 1 provides a summary of the EJ Indexes exceeding the 80th percentile among the state or US for the 3.1-mile study area based on EJScreen versions 2.1 and 2.2.

Table 1. EJ Indexes of Interest for the Study Area						
EJ Index^a	State Percentile			US Percentile		
	v2.1	v2.2	Change^b	v2.1	v2.2	Change^b
Air Toxics Cancer Risk	91	96	↑	95	98	↑
Air Toxics Respiratory HI	90	56	↓	94	84	↓
Diesel Particulate Matter	86	82	↓	90	85	↓
Lead Paint	80	82	↑	81	81	—
Ozone	17	95	↑	32	83	↑
Particulate Matter 2.5	83	81	↓	89	86	↓
RMP Facility Proximity	79	81	↑	87	91	↑
Toxic Releases to Air	N/A	96	N/A	N/A	97	N/A
Wastewater Discharge	87	87	—	90	89	↓
Notes						
HI = hazard index; N/A = not applicable; RMP = Risk Management Program; v = version (of EJScreen).						
^a EJ Indexes were below the 80 th percentile for Traffic Proximity, Superfund Proximity, Hazardous Waste Proximity, and Underground Storage Tanks in EJScreen versions 2.1 and 2.2.						
^b Notes either increase, decrease or no change in reported percentile for study area from EJScreen version 2.1 to version 2.2.						

As shown in Table 1, the EJ Indexes that were at or above the 80th percentile for the state and/or US percentiles in EJScreen version 2.1 remained at or above the 80th percentile threshold for the state and/or US percentiles in the updated version of EJScreen. For these indexes, the changes in both state and US percentiles are attributed to the updated source data years (including Census data)⁵ applied in the latest iteration of EJScreen. Most of these changes were moderate (≤ 5 percent), with the exception of Air Toxics Respiratory HI, which experienced a marked decrease in the state and US percentiles (from the 90th to 56th percentile state and from the 94th to 84th percentile US).

Unlike EJScreen version 2.1 results, the EJ Index for Ozone exceeds the 80th percentile threshold in version 2.2. The increase is attributed to the updated methodology used in calculating ambient ozone concentrations, described in Section 2. Discussion of the ozone environmental indicator is provided in Section 3.3.1. The EJ Index for Toxic Releases to Air, which was not included in the previous version of EJScreen, also exceeds the 80th percentile and is discussed in Section 3.3.2.

3.3 Updated Environmental Indicators

Table 2 lists the environmental indicator values associated with EJ Indexes exceeding the 80th percentile in EJScreen version 2.2 as discussed in Section 3.2. These values are largely based on data collected through 2019⁶ and are not necessarily inclusive of influences from the KMe Facility, which began operations in portions of the plant in late 2020 and was not fully operational until third quarter of 2021.

Environmental Indicators of Interest	Environmental Indicator Value		State Percentile		US Percentile	
	v2.1	v2.2	v2.1	v2.2	v2.1	v2.2
Air Toxics Cancer Risk (risk per million people) ^a	54	54	92	84	95-100 th	98
Air Toxics Respiratory HI (unitless) ^a	0.5	0.34	90	1	95-100 th	31
Diesel Particulate Matter ($\mu\text{g}/\text{m}^3$)	0.388	0.268	73	65	70-80 th	62
Lead Paint (% Pre-1960 Housing)	0.23	0.2	65	61	51	48
Ozone (ppb)	34.6	61.3	5	84	9	52
Particulate Matter 2.5 ($\mu\text{g}/\text{m}^3$)	9.29	8.53	58	57	71	59

⁵ While version 2.1 generally used data from 2017 and earlier, version 2.2 generally incorporates data from 2019 to 2023.

⁶ All indicator values were upgraded to reflect data collected through 2019 with the exception of: lead paint (American Community Survey 2017-2021), RMP facility (data year 2022), toxic releases to air (modeling year 2021), wastewater discharge (data year 2020).

Environmental Indicators of Interest	Environmental Indicator Value		State Percentile		US Percentile	
	v2.1	v2.2	v2.1	v2.2	v2.1	v2.2
RMP Facility Proximity (facility count/km distance)	0.75	0.47	61	63	68	75
Toxic Releases to Air (score)	N/A	31,000	N/A	86	N/A	97
Wastewater Discharge (toxicity-weighted concentration/meter distance)	0.0065	0.0077	69	69	65	65

Notes
 HI = hazard index; N/A = not applicable; ppb = parts per billion; RMP = Risk Management Program; v = version (of EJScreen)
^a Version 2.1 values calculated using 2017 AirToxScreen; Version 2.2. uses 2019 AirToxScreen data.

As shown in Table 2, the Environmental Indicators for Air Toxics HI, Diesel Particulate Matter, Lead Paint, Particulate Matter 2.5, and RMP Facility Proximity all decreased between EJScreen version 2.1 and 2.2. For those EJ Indexes where both the EJ Index percentiles (Table 1) and Environmental Indicators (Table 2) decreased, the analysis provided in the June 19, 2023, EJ Assessment is conservative and the conclusions remain relevant. Therefore, Air Toxics Respiratory HI and Particulate Matter 2.5 are not discussed further.

This is also the case for Diesel Particulate Matter (DPM). However, because the analysis of DPM in Section 2.11.3.1.3 of the June 19, 2023, EJ Assessment referred only to DPM emissions from six KMe Facility emergency engines and firewater pumps, Koch is hereby clarifying that the proposed Project will not result in a material increase in DPM emissions from transportation of methanol product from the KMe Facility. Specifically, Koch reviewed the impact that increases in production resulting from the proposed Project will have on diesel-powered truck, rail and marine modes for methanol product shipment. Based on current forecasts, the increased methanol production is projected to be shipped to customers primarily by rail in the foreseeable future. Thus, marine and truck shipments are not forecasted to increase in a material amount. Moreover, DPM emissions from rail transport are not expected to significantly increase because, while the number of railcars on a single train may increase, the number of trains and locomotives associated with each train are not.

Although the EJ Index values in Table I for Air Toxics Cancer Risk increased from 91st to 96th percentile (state) and 95th to 98th percentile (US) with version 2.2 of EJScreen, as shown in Table 2 the air toxics cancer risk environmental indicator value of 54 in 1 million people did not change and the related state percentile decreased from the 92nd to the 84th percentile, and the related US percentile remained within the prior range (95-100th percentile to 98th percentile). Therefore,

the analysis and conclusions provided in the June 19, 2023, EAS with respect to Air Toxics Cancer Risk remain relevant.

Although the EJ Index for Lead Paint (state percentile) increased slightly from 80 to 82 percent (Table 1), the environmental indicator value decreased (Table 2). Since the KMe Facility does not emit lead or use lead-based paints and will not use lead-based paint or coatings with the proposed Project, the conclusions provided in the June 19, 2023, EAS remain relevant.

Similarly, for RMP Proximity, although the EJ Index percentiles increased slightly (Table 1), the environmental indicator value decreased substantially (Table 2). The EJ Index for proximity to facilities with RMPs is based on a total count of facilities within 5 km (or nearest facility beyond 5 km) of the study area, each divided by distance. In the prior June 19, 2023, EJ Assessment, no RMP facilities were found within 5 km of the KMe Facility, and this remains unchanged.⁷ Therefore, the analysis and conclusions for RMP Proximity included in the June 19, 2023, EAS remain relevant.

The Wastewater Discharge results in EJScreen version 2.2 report a slightly higher but still relatively very low environmental indicator value but high EJ Index percentiles for wastewater discharge, similar to version 2.1. More specifically, the latest environmental indicator of 0.0077 remains more than three orders of magnitude lower than the average indicator value reported for both the state (49) and the US (22). Thus, conclusions do not differ from those discussed in the June 19, 2023, EAS.

The EJ Index and environmental indicator value reported for ozone increased above the 80th percentile in version 2.2 of EJScreen and is discussed in Section 3.3.1. A comprehensive analysis of the newest indicator, Toxic Releases to Air, is included in Section 3.3.2.

3.3.1 Ozone

The environmental indicator for ozone in EJScreen version 2.2, 61.3 parts per billion (ppb), reflects the annual mean of the ten highest daily maximum 8-hour concentrations of ozone in the air and is based on monitor and modeling data provided by the Office of the Air Quality Planning and Standards (OAQPS). This ozone concentration slightly exceeds the state average of 59.8 ppb and is consistent with the US average of 61.6 ppb. The EJ index for Ozone using EJScreen version 2.2 is 95th percentile in state and 83rd percentile in US. Neither the state nor US percentiles exceeded the 80th percentile for the Ozone EJ Index in EJScreen version 2.1. The EPA's updated methodology for calculating ozone data has increased the ranking of this indicator relative to the state and US.

⁷ <https://www.epa.gov/frs/frs-query>, accessed February 17, 2023 and September 13, 2023.

Ozone was evaluated as part of the Air Quality Impact Assessment (AQIA).⁸ That evaluation, which considered total KMe facility emissions and not just the Project emissions increases, predicted an ozone contribution of 0.48 ppb from operation of the KMe Facility following implementation of the Project. A discussion of this evaluation is provided in the AQIA, which includes the information provided in Table 3, below.

Table 3. Predicted Changes in Ozone Concentration at KMe Facility				
Nearest Local Air Monitor	Current Design Value (ppb)^a	Predicted Ozone Increase (ppb)	Projected Design Value (ppb)	NAAQS (ppb)
Convent	59	0.48 ^b	59.48	70
<p>Notes NAAQS = National Ambient Air Quality Standards; ppb=parts per billion Data in this table are derived from the Air Quality Impact Analysis (AQIA) and revisions. ^a The design value, which is used to determine if air quality complies with NAAQS, is derived from monitoring data recorded at the Convent, LA ozone monitoring station for calendar years 2019 to 2021. ^b Value derived utilizing EPA'S "Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and PM2.5 under the PSD Permitting Program," dated April 30, 2019. Additional details are available in the AQIA and revisions.</p> <p>Reference Appendix E, KME Optimization Project: Application for a Significant Modification to Title V Permit #2560-00295-V4 and an Initial PSD permit, 11/2/2022, and Revised Air Quality Impact Assessment Application Addendums, 2/8/2023 and 6/1/23.</p>				

The cumulative estimate of ozone based on the 61.3 ppb estimate provided in EJScreen with the contribution of 0.48 ppb from the KMe Facility calculated in the AQIA is 61.78 ppb (an increase of 0.78%), which is well below the 8-hour ozone NAAQS of 70 ppb. When assessing ozone concentrations based on the nearest air monitoring station in Convent, Louisiana, the KMe Facility's predicted contribution of ozone, 0.48 ppb, results in a cumulative predicted concentration of 59.48 ppb, which also remains well below the 8-hour ozone NAAQS.⁹ It is also noteworthy that the facility impact (0.48 ppb), determined following EPA guidance using appropriate and technically credible relationships between emissions and ambient impacts of ozone, is well below the 1 ppb Significant Impact Level set for ozone by EPA. EPA

⁸ Appendix E, KME Optimization Project: Application for a Significant Modification to Title V Permit #2560-00295-V4 and an Initial PSD permit, 11/2/2022, and Revised Air Quality Impact Assessment Application Addendums, 2/8/2023 and 6/1/23.

⁹ The background concentration value obtained from EJScreen (61.3 ppb) and the design value (59 ppb) differ slightly as they are calculated differently. The EJScreen value is the average of the ten highest daily-maximum 8-hour ozone concentrations in a single year. The design value selects the fourth highest daily-maximum 8-hour ozone value in each of three years and averages the three selected values, so it represents a multi-year average. An additional difference is that EJScreen values are a blend of modeled and monitored data, while the design value is derived solely from monitored data.

has considered sources whose ambient impacts fall below a Significant Impact Level to have de minimis impacts on air quality.

In conclusion, ozone contributions from the KMe Facility following implementation of the Project will not cause or contribute to an exceedance of the ozone NAAQS, and ozone concentrations increases from the Project are considered insignificant. Therefore, the KMe Facility will not result in adverse impacts related to this environmental index.

3.3.2 Toxic Releases to Air

A new EJ Index included in EJScreen version 2.2 is Toxic Releases to Air. The study area's Environmental Indicator value of 31,000 for Toxic Releases to Air is based on EPA's Risk-Screening Environmental Indicators (RSEI)-modeled toxicity-weighted concentrations of reportable Toxic Release Inventory (TRI) chemicals in the air and is calculated using the RSEI Geographic Microdata (RSEI-GM) results for the air pathway. RSEI-GM provides the ability to analyze RSEI model outputs and results from a receptor-based perspective of potentially impacted geographic areas. The use of RSEI Scores available on EPA's [EasyRSEI Dashboard](#) allows chemical release data to be assigned to the facility level. EPA indicates that *"RSEI Scores add context to chemical release data reported by facilities to the Toxics Release Inventory (TRI) by considering the size of the chemical release, the fate and transport of the chemical through the environment, the size and location of the exposed population, and the chemical's toxicity."* While RSEI scores provide context, they are not intended to measure or estimate risk.¹⁰

The most recent RSEI scores available on EPA's EasyRSEI Dashboard utilize calendar year 2021 TRI data. The 2021 TRI data-based RSEI Risk score for fugitive air releases, stack air releases, and off-site incineration in St. James Parish was 166,194.1. Over 83% of this parish-wide score is the result of bis(2-chloroethyl) ether and 1,2-dichloroethane emissions, which are not used at or emitted from the KMe Facility. The KMe Facility became fully operational in third quarter 2021. During that partial operating year, the KMe Facility RSEI score of 2.4 represents a very small contribution (less than 0.002%) to the St James Parish-wide score.

The RSEI Risk Score = TRI Releases (lb) x Toxicity Weight x Population Exposure. RSEI scores for newer data sets can be reasonably predicted by calculating Site-Specific "Population Exposure Factors" for fugitive and stack emissions using the following equation: Site-Specific Population Exposure Factor = EPA Site RSEI Risk Score / (Site Releases (lb) x Toxicity Weight). The results for the KMe Facility are shown in Table 4.

¹⁰ EPA states that "RSEI Scores do not describe a level or estimate of risk (such as the number of excess cancer cases) and cannot be used solely to draw conclusions about risk. RSEI Scores are designed to be compared to provide context from a relative risk-related perspective. Calculated as relative measures using the same method, RSEI Scores can be viewed and aggregated in various ways to examine potential impacts posed by chemical releases." (Source: EPA. 2023. Understanding RSEI Results. Available at <https://www.epa.gov/rsei/understanding-rsei-results#what>).

Table 4. KMe Facility (TRI ID 7000WYCMTH6856L) – 2021					
Chemical	Source	Emissions (lb)	Inhalation Toxicity Weight	Site-Specific Population Exposure Factor	EPA RSEI Risk Score
Ammonia	Stack	23,600	7	0.000012	2.0
Ammonia	Fugitive	1,320	7	0.000038	0.4
Methanol	Stack	13,730	0.18	0.000012	0.03
Methanol	Fugitive	3,680	0.18	0.000038	0.025
TOTAL					2.4

Applying these calculated Site-Specific Population Exposure Factors to the Koch Methanol Facility’s full calendar year 2022 TRI data results in an estimated RSEI Risk Score of 4.4 (see Table 5), which is less than 0.003% of the currently available St. James Parish RSEI Risk score of 166,194.1. While there will be an increase in emissions as a result of the Project, the nature of the emissions and materials handled is not expected to change. Therefore, after project implementation, the KMe Facility will remain an insignificant contributor to the St. James Parish RSEI Risk Score and the EJSscreen Toxic Releases to Air Environmental Indicator value. Therefore, the KMe Facility will not result in adverse impacts related to this environmental index.

Table 5. St James Methanol (TRI ID 7000WYCMTH6856L) - 2022					
Chemical	Source	Emissions (lb)	Inhalation Toxicity Weight	Site-Specific Population Exposure Factor	EPA RSEI Risk Score
Ammonia	Stack	46,239	7	0.000012	3.9
Ammonia	Fugitive	1,342	7	0.000038	0.4
Methanol	Stack	58,899	0.18	0.000012	0.13
Methanol	Fugitive	8,770	0.18	0.000038	0.060
TOTAL					4.4

3.4 Socioeconomic Indicators

EJSscreen version 2.2 evaluates eight socioeconomic/demographic indicators that represent the social vulnerability characteristics of a population that does not have equitable access to environmental protections afforded to other populations. These factors are listed in the EJSscreen Community Report. The following three socioeconomic indicators exceed the 80th percentile in state or US comparison populations in the EJSscreen version 2.2 report:

- People of Color (82nd percentile in state and 84th percentile in US)
- Low Income (84th percentile in US)
- Low Life Expectancy (83rd percentile in US)

Indicators for people of color and low income also were greater than the 80th percentile in the EJScreen version 2.1 report. Low life expectancy was not reported in version 2.1 of EJScreen. The influence of the KMe Facility on community socioeconomics, through investments in the economy, education, and outreach, are described in Sections 2.11.3.2, 3.1 and 3.2 of the June 19, 2023, EAS.

3.5 Miscellaneous Updates

In reviewing the EJ assessment in light of the updates to EJScreen from version 2.1 to 2.2, KMe identified a few minor updates needed to clarify information in Tables D-10 to D-13, which were included in Sections 2.11.3.1.1 and 2.11.3.1.2 of the June 19, 2023, EAS. None of these updates change the conclusions for these sections, since the Total Cancer Risk and Total Facility HI remain unchanged. A brief list of the updates is noted here, and the updated tables are included as Attachment B.

- Table D-10: Updated 1,4-Dichlorobenzene concentration from 0.00001 $\mu\text{g}/\text{m}^3$ to $<0.00001 \mu\text{g}/\text{m}^3$ and added Cadmium and Chromium VI concentration results to this table, which also are $<0.00001 \mu\text{g}/\text{m}^3$ and, as shown in the table, well below the Louisiana Ambient Air Standards (LAAS) for these chemicals.
- Table D-11: Updated Note NC to reflect that risks were not calculated for certain substances which had extremely low (i.e., $\leq 0.00002 \mu\text{g}/\text{m}^3$) predicted air concentrations. The Total Cancer Risk and other information presented in this table remain unchanged from the June 19, 2023, EAS.
- Table D-12: Added Copper, 2,2,4-Trimethylpentane, and Zinc concentration results to this table. As shown in the revised table, the maximum concentrations of copper and zinc are several orders of magnitude lower than their respective LAAS (there is no LAAS for 2,2,4-Trimethylpentane). Added footnote to clarify that chemicals that are carcinogenic are addressed in Table D-10.
- Table D-13: Added a footnote to the table and sorted the chemicals in descending order of risk. No new chemicals were added to the table. The Total Facility HI remained unchanged from the June 19, 2023, EAS.

4 CONCLUSIONS

The EJ assessment presented in the June 19, 2023, EAS was performed to ensure that any adverse effects of the proposed Project, including any adverse effects on environmental justice communities, have been identified and avoided to the maximum extent possible. The June 19, 2023, EJ assessment, which utilized EJScreen version 2.1, found that 7 out of 12 EJ Indexes were equal to or greater than the 80th percentile threshold used to determine if additional review is warranted. The newest iteration of EJScreen (version 2.2) resulted in 9 out of the 13 indexes exceeding the 80th percentile threshold: Air Toxics Cancer Risk, Air Toxics Respiratory HI, DPM, Lead Paint, Ozone, Particulate Matter 2.5, RMP Facility Proximity, Toxic Releases to Air, and Wastewater Discharge.

Review of the updated results using EJSscreen version 2.2 indicates that the results are generally consistent with the results presented in the June 19, 2023, EAS and, therefore, the prior analyses and conclusions remain relevant with only two exceptions where additional EJ Indexes are greater than the 80th percentile: 1) Ozone and 2) a new indicator, Toxic Releases to Air. Analyses of these two EJ Indexes was performed to further evaluate potential facility-specific impacts. This analysis of these environmental indicators indicates that the KMe Facility will not cause adverse impacts and, therefore, will not result in disproportionate impacts and is based on data relied on in EJSscreen and facility-specific air emissions data and other characteristics as follows:

- Ozone: Ozone contributions from the KMe Facility following implementation of the Project will not cause or contribute to an exceedance of the ozone NAAQS, and ozone concentration increases from the Project are considered insignificant. Therefore, the KMe Facility will not result in adverse impacts related to this environmental index.
 - When assessing ozone concentrations based on the 61.3 ppb estimate provided in EJSscreen, the KMe Facility's predicted contribution of 0.48 ppb ozone, results in a cumulative ozone concentration of 61.78 ppb (an increase of 0.78%), which remains well below the 8-hour ozone NAAQS (70 ppb).
 - When assessing ozone concentrations based on the nearest air monitoring station in Convent, Louisiana, the KMe Facility's predicted contribution of ozone, 0.48 ppb, results in a cumulative predicted concentration of 59.48 ppb, which also remains well below the 8-hour ozone NAAQS.
 - The KMe Facility's impact (0.48 ppb) is well below the 1 ppb Significant Impact Level set for ozone by EPA.
- Toxic Releases to Air: After project implementation, the KMe Facility will remain an insignificant contributor to the St. James Parish RSEI Risk Score and the EJSscreen Toxic Releases to Air Environmental Indicator value. Therefore, the KMe Facility will not result in adverse impacts related to this environmental index.
 - The estimated RSEI score of 4.4 for the KMe Facility is less than 0.003% of the current St. James Parish RSEI Risk score of 166,194.1. While there will be an increase in emissions as a result of the proposed Project, the nature of the emissions and materials handled are insignificant contributors to the St James Parish RSEI score and the Toxic Releases to Air Environmental Indicator value.

While the KMe Facility operations result in no to negligible adverse impact on the surrounding community, as noted in the June 19, 2023, EAS, beneficial social impacts will be realized through investments by Koch in the areas of education, community enrichment, entrepreneurship, and environment. In addition, economic benefits to the community will be gained through job creation and labor income during Project construction and continued operations. Koch's investments are informed, in part, through engagement with the community, which has included

community outreach specific to this permit application. This involvement has included joint training with local emergency services personnel, employee outreach through volunteer activities, KMe Facility's participation with the St. James Citizens Advisory Panel (CAP), focus group meetings, and initiation of a community advisory board (CAB).

Koch established a CAB to foster regular and sustained engagement between the KMe facility and the community so that community feedback can be received on a routine and ongoing basis. The CAB was formed in February 2023 and ongoing monthly meetings have been held since March 2023 to cover topics of interest to the CAB such as KMe's overall environmental stewardship as well as air emissions and water discharges from the KMe facility. Ongoing and future engagement with local advisory groups will continue to be a priority, informing KMe Facility's long-term community outreach efforts.

In summary, following review and assessment of EJSscreen version 2.2 results, the conclusions presented in the June 19, 2023, EAS remain unchanged. Specifically, the EJ analysis continues to demonstrate that the proposed Project will not result in adverse impacts either directly or cumulatively considering existing conditions surrounding the KMe Facility. Accordingly, it also demonstrates that the proposed Project will not cause disproportionate impacts (adverse impacts borne disproportionately on the basis of race, color, or national origin).

Koch Methanol St. James, LLC

Comments Regarding Proposed Air Operating Significant Permit Modification and Initial PSD Permit and EAS

Attachment A

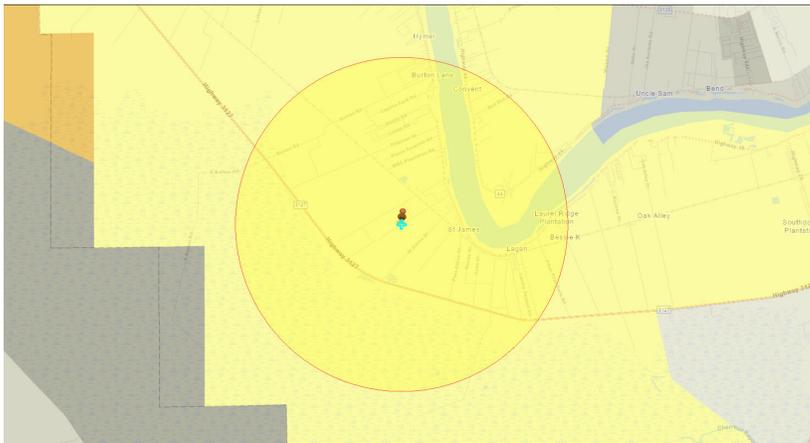
EJScreen Community Report for KMe Facility

EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

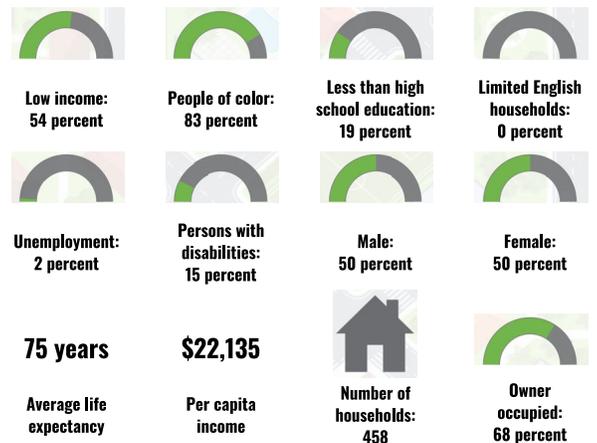
St. James Parish, LA

5 kilometers Ring Centered at 29.984288,-90.850381
 Population: 1,093
 Area in square miles: 30.32



1/26, 2023
 KM 5 2.2
 culate Matter 2.5
 onal Percentiles
 50 - 60 percentile
 60 - 70 percentile
 70 - 80 percentile
 80 - 90 percentile
 Search Result (point)
 172,224
 0 0.75 1.5 3 mi
 0 1.25 2.5 3 km
 COMMAP, Esri, HERE, DeLorme, SwatchGrip, GeoTechnologies, Inc., METRAXA, UGC, EPA, IPL, USDA

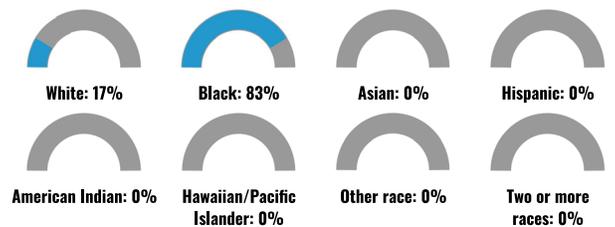
COMMUNITY INFORMATION



LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	100%

BREAKDOWN BY RACE



BREAKDOWN BY AGE



LIMITED ENGLISH SPEAKING BREAKDOWN



Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017 -2021. Life expectancy data comes from the Centers for Disease Control.

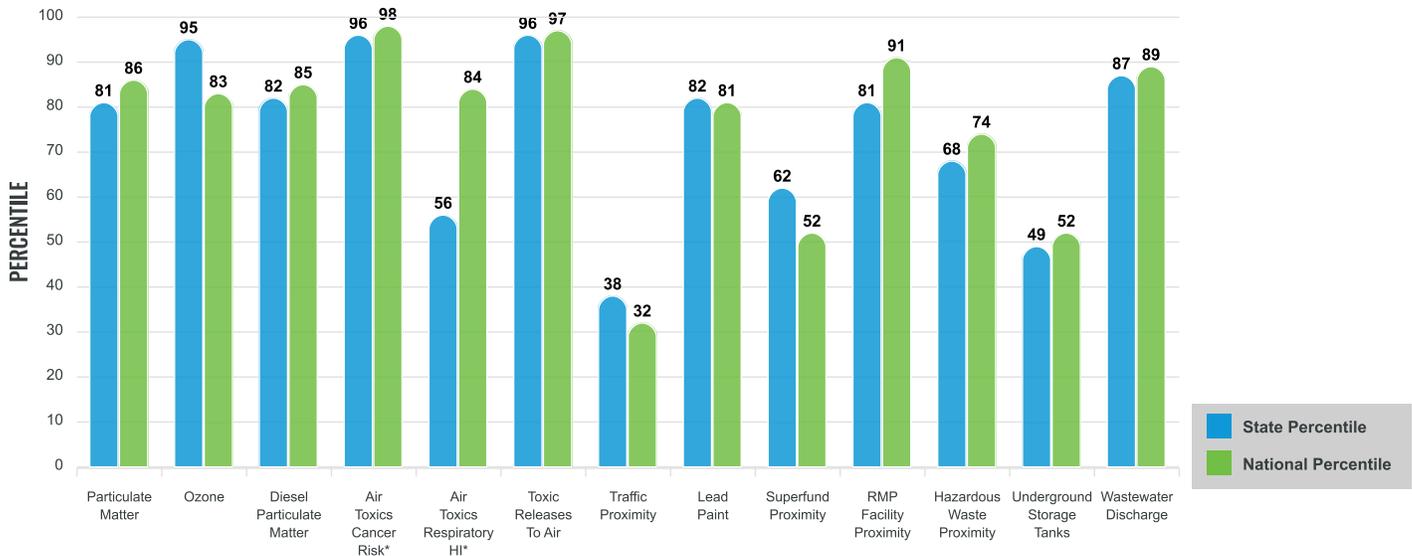
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the [EJScreen website](#).

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

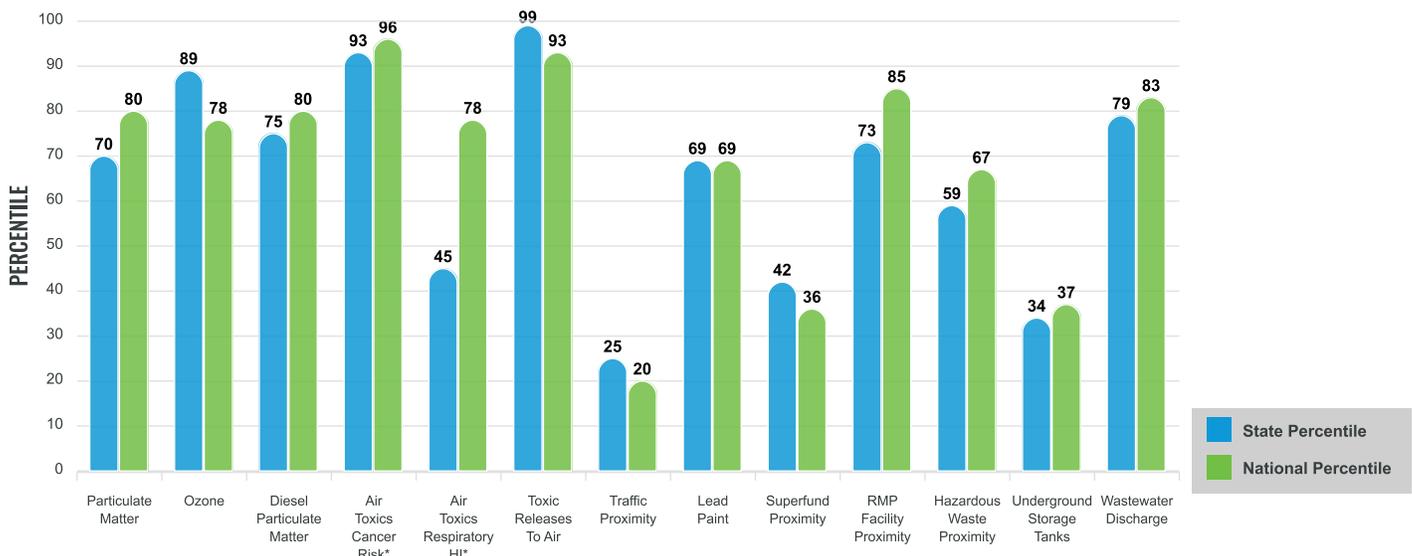
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for 5 kilometers Ring Centered at 29.984288,-90.850381

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter ($\mu\text{g}/\text{m}^3$)	8.53	8.62	57	8.08	59
Ozone (ppb)	61.3	59.8	84	61.6	52
Diesel Particulate Matter ($\mu\text{g}/\text{m}^3$)	0.268	0.247	65	0.261	62
Air Toxics Cancer Risk* (lifetime risk per million)	54	40	84	28	98
Air Toxics Respiratory HI*	0.34	0.38	1	0.31	31
Toxic Releases to Air	31,000	15,000	86	4,600	97
Traffic Proximity (daily traffic count/distance to road)	4.2	86	16	210	10
Lead Paint (% Pre-1960 Housing)	0.2	0.22	61	0.3	48
Superfund Proximity (site count/km distance)	0.02	0.076	29	0.13	18
RMP Facility Proximity (facility count/km distance)	0.47	0.62	63	0.43	75
Hazardous Waste Proximity (facility count/km distance)	0.36	1.1	44	1.9	45
Underground Storage Tanks (count/km ²)	0.081	2.2	23	3.9	27
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.0077	49	69	22	65
SOCIOECONOMIC INDICATORS					
Demographic Index	68%	41%	81	35%	89
Supplemental Demographic Index	20%	17%	63	14%	77
People of Color	83%	43%	82	39%	84
Low Income	54%	40%	70	31%	84
Unemployment Rate	3%	7%	43	6%	41
Limited English Speaking Households	0%	2%	0	5%	0
Less Than High School Education	19%	15%	68	12%	79
Under Age 5	7%	6%	66	6%	70
Over Age 64	16%	17%	52	17%	51
Low Life Expectancy	23%	22%	62	20%	83

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	0
Water Dischargers	56
Air Pollution	16
Brownfields	1
Toxic Release Inventory	3

Other community features within defined area:

Schools	5
Hospitals	0
Places of Worship	6

Other environmental data:

Air Non-attainment	No
Impaired Waters	Yes

Selected location contains American Indian Reservation Lands* No
 Selected location contains a "Justice40 (CEJST)" disadvantaged community Yes
 Selected location contains an EPA IRA disadvantaged community N/A

Report for 5 kilometers Ring Centered at 29.984288,-90.850381

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	23%	22%	62	20%	83
Heart Disease	7.9	7	69	6.1	81
Asthma	11.4	9.9	83	10	84
Cancer	5.6	5.9	30	6.1	35
Persons with Disabilities	13.4%	15.9%	36	13.4%	56

CLIMATE INDICATORS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	20%	25%	59	12%	85
Wildfire Risk	0%	7%	0	14%	0

CRITICAL SERVICE GAPS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	28%	20%	71	14%	86
Lack of Health Insurance	8%	8%	51	9%	57
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

Footnotes

Report for 5 kilometers Ring Centered at 29.984288,-90.850381

Koch Methanol St. James, LLC

Comments Regarding Proposed Air Operating Significant Permit Modification and Initial PSD Permit and EAS

Attachment B

Tables D-10 through D-13

Attachment B:

Tables D-10 to D-13 in Sections 2.11.3.1.1 and 2.11.3.1.2 of the June 19, 2023, EAS

Table D-10: Comparison of Maximum Off-Property Carcinogenic Air Toxic Annual Average Concentrations to Louisiana Ambient Air Standards			
Chemical	Maximum Annual Average Air Concentration (µg/m³)	Louisiana Ambient Air Standard - Annual Average (µg/m³)	Louisiana Ambient Air Standard - 8 Hour Average (µg/m³)
Acetaldehyde	0.00085	46	NA
Other Aldehydes	0.0028	46	NA
Arsenic	<0.00001	0.02	NA
Benzene	0.00039	12	NA
Cadmium	<0.00001	0.06	NA
Chromium VI	<0.00001	0.01	NA
Cobalt	<0.00001	NA	NA
1,4-Dichlorobenzene	<0.00001	NA	1,430
DPM	0.0065	NA	NA
Ethylbenzene	0.00019	NA	10,300
Formaldehyde	0.0054	7.7	NA
Naphthalene	0.00002	NA	1,190
Nickel	0.00002	0.21	NA
<p>Notes: NA = not available µg/m³ = microgram per cubic meter LDEQ = Louisiana Department of Environmental Quality (LDEQ 2013)</p> <p>References: LDEQ. 2013. Title 33 Environmental Quality. Table 51.2. Louisiana Toxic Air Pollutant Ambient Air Standards. May.</p>			

Table D-11: Estimated Facility Cancer Risks at Maximally Exposed Current Residential Location	
Chemical	Cancer Risk^a
DPM	1.6E-07 (midpoint of potential cancer risk range; ideally presented as 2E-08 to 2E-06) ^b
Formaldehyde	2.1E-08
Acetaldehyde	1.1E-09
Other Aldehydes	6.2E-10
Benzene	3.1E-10
Ethylbenzene	2.5E-11
1,4-Dichlorobenzene	NC
Arsenic	NC
Cadmium	NC
Chromium VI	NC
Cobalt	NC
Naphthalene	NC
Nickel	NC
Total Cancer Risk	2E-07 (i.e., 0.2 in one million) (midpoint of 2E-08 to 2E-06 estimated cancer risk)
Notes:	
<p>a. Cancer risks presented for the residence with the highest predicted risk, UTM: 708807, 3319335.</p> <p>b. The DPM cancer risk presented here is based on a toxicity estimate proposed by California EPA (3E-04 per $\mu\text{g}/\text{m}^3$) and has not been formally adopted for use in baseline risk assessment by EPA. EPA has determined that the existing literature is lacking and does not support quantitative dose-response evaluation of DPM carcinogenic potency.¹ Due to uncertainty in quantifying DPM potency, risks are better represented as a range using an analysis initially presented and then withdrawn by EPA (10^{-3} to 10^{-5} per $\mu\text{g}/\text{m}^3$). The use of this range underscores the lack of confidence expressed by EPA in assessing the carcinogenic potency of this chemical mixture.</p>	
NC: risks not calculated due to extremely low (i.e., $\leq 0.00002 \mu\text{g}/\text{m}^3$) predicted air concentration.	

¹ EPA. 2003. Integrated Risk Information System (IRIS) Chemical Assessment Summary, Diesel Engine Exhaust, https://iris.epa.gov/ChemicalLanding/&substance_nمبر=642, accessed February 17, 2023.

Table D-12: Comparison of Maximum Off-Facility Annual Average Noncarcinogenic Air Toxics Concentrations to Louisiana Ambient Air Standards^a		
Chemical	Maximum Annual Average Air Concentration ($\mu\text{g}/\text{m}^3$)	Louisiana Ambient Air Standard - 8 Hour Average ($\mu\text{g}/\text{m}^3$)
Ammonia	1.2	640
Barium	0.00004	12
Copper	<0.00001	23.8
Hydrogen sulfide	1.7	330
Manganese	<0.00001	4.8
Mercury	<0.00001	1.2
Methanol	40	6,240
n-Hexane	0.0081	4,190
Toluene	0.00044	8,900
2,2,4-trimethylpentane	0.00069	NA
Zinc	0.00025	119
<p>Notes: a. Chemicals that are carcinogenic are addressed in Table D-10 and not repeated in this table. NA = not available $\mu\text{g}/\text{m}^3$ = microgram per cubic meter LDEQ = Louisiana Department of Environmental Quality (LDEQ 2013)</p> <p>References: LDEQ. 2013. Title 33 Environmental Quality. Table 51.2. Louisiana Toxic Air Pollutant Ambient Air Standards. May.</p>		

Table D-13: Estimated Facility Respiratory HI	
Chemical	Maximum Residential Exposure Location
Hydrogen sulfide	0.037
Formaldehyde	0.00017
Ammonia	0.00012
DPM	0.00010
Methanol	0.000068
Acetaldehyde	0.000056
Other Aldehydes	0.000056
Barium	0.000020
n-Hexane	0.0000024
2,2,4-trimethylpentane	0.0000015
Benzene	0.0000013
Ethylbenzene	2.0E-08
Toluene	6.0E-09
Total Facility HI	0.04
<p>Notes:</p> <p>a. Noncancer HI presented for the residence with the highest predicted risk, UTM: 708807, 3319335 HI = Hazard Index Hazards not calculated for arsenic, cadmium, chromium, cobalt, copper, 1,4,-dichlorobenzene, manganese, mercury, naphthalene, and nickel due to extremely low (i.e., $\leq 0.00002 \mu\text{g}/\text{m}^3$) predicted air concentration. Additionally, hazards unable to be calculated for copper and zinc due to lack of inhalation toxicity value.</p>	