

Preliminary Determination Summary

MPH Bastrop Peakers, LLC
Permit Numbers 178585, PSDTX1658, and GHGPSDTX247

I. Applicant

MPH Bastrop Peakers LLC
4747 Bethesda Avenue Suite 1220
Bethesda, Maryland 20814-5587

II. Project Location

MPH Facility
125 Old Bastrop Road
Bastrop County
Cedar Creek, Texas 78612

III. Project Description

MPH Bastrop Peakers, LLC (MPH) proposes construction of six simple-cycle, peaking combustion turbines at the Bastrop Energy Center, with a nominal output of 195 megawatts (MW) each at International Standards Organization Conditions, and ancillary emission sources, such as an emergency generator, storage tanks, and fugitive emissions. The MPH Facility is located within the property boundary of the existing Bastrop Energy Center in Bastrop County, Texas.

IV. Emissions

Air Contaminant	Proposed Allowable Emission Rates (tpy)
VOC	21.62
NO _x	726.50
SO ₂	30.75
CO	613.26
PM/PM ₁₀ /PM _{2.5}	190.68
HAPs	11.63
H ₂ SO ₄	5.22
CO ₂	2,621,719.68
CH ₄	50.48
SF ₆	0.01
N ₂ O	4.89
CO ₂ Equivalents (CO ₂ e)	2,624,542.99

CO₂e - carbon dioxide equivalents based on global warming potentials of
CH₄ = 28, N₂O = 298, SF₆=23,500.

V. Federal Applicability

The site will be located in Bastrop County, which is classified as attainment for all criteria pollutants. Therefore, Nonattainment review is not applicable.

The site is an existing major source for CO, NO_x, PM, PM₁₀, and PM_{2.5} is a PSD named source. Therefore, the PSD review threshold is 100 tpy for criteria pollutants. Since the site is an existing major source, each criteria pollutant and GHGs are compared against the PSD Significant Emission Rate (SER) to determine if the project triggers PSD review for these pollutants. The emissions of CO, NO_x, PM, PM₁₀, PM_{2.5}, and CO_{2e} are greater than the PSD major source threshold, therefore PSD review applies to CO, NO_x, PM, PM₁₀, PM_{2.5}, and CO_{2e}.

The following chart illustrates the annual project emissions for each pollutant and whether this pollutant triggers PSD review.

Pollutant	Project Emissions (tpy)	Significant Emission Rate Trigger (tpy)	PSD Triggered Y/N
VOC	21.55	40	N
NO _x	726.50	40	Y
SO ₂	30.75	40	N
CO	613.26	100	Y
PM	190.68	25	Y
PM ₁₀	190.68	15	Y
PM _{2.5}	190.68	10	Y
H ₂ SO ₄	5.22	7	N
CO _{2e}	2,624,543.05	75,000	Y

VI. Control Technology Review

The proposed control technology is consistent with PSD BACT for PSD pollutants and state minor BACT for non-PSD pollutants. A control technology review was conducted for all pollutants. The controls described in this section were determined to satisfy BACT requirements based on a review of recently issued permits from Texas and other states, and consideration of the RACT/BACT/LAER Clearinghouse (RBLC) data provided by the applicant.

Source Name	EPN	Best Available Control Technology Description
Simple Cycle Combustion Turbines 1-4 and 8-9	SCCT-1, SCCT-2, SCCT-3,	Hourly emission rates for each pollutant are derived from the unit load and ambient temperature resulting in the highest

	SCCT-4, SCCT-8, and SCCT-9	hourly emissions for each CT. Good combustion practices are used. Maximum annual emission rates for routine normal operations, excluding startup and shutdown periods, were calculated assuming 3,139 hours/year/turbine firing exclusively natural gas at the maximum hourly emission rates. Turbines meet the following emission limits: NOx: Excluding periods of startup and shutdown, the CT exhaust NOx concentration will not exceed 9 parts per million by dry volume (ppmvd) corrected to 15 percent oxygen on a 3-hour average, through use of dry low-NOx (DLN) CT combustors. This is consistent with the BACT accepted for FPEC, LLC Permit Nos. 173582, PSDTX1626, and GHGPSDTX233. In support of the Tier I BACT determination, MPH provided a cost analysis which concluded that with the proposed 40% capacity factor the installation of a selective catalytic reduction (SCR) system is not economically feasible. The cost analysis shows that the cost effectiveness in dollars per ton (\$/ton) is \$53,691/ton/turbine. CO: Excluding periods of startup and shutdown, the CT exhaust CO concentration will not exceed 9 ppmvd corrected to 15 percent oxygen on a 3-hour average. This is consistent with the BACT accepted for FPEC, LLC Permit Nos. 173582, PSDTX1626, and GHGPSDTX233. VOC: Excluding periods of startup and shutdown, 0.5 ppmvd @ 15% O₂ on a rolling 3-hr average achieved through use of good combustion practices. SO₂: The CTs will fire exclusively pipeline-quality natural gas containing no more than 0.5 grains of total sulfur per 100 standard cubic feet (gr S/100 scf). PM/PM₁₀/PM_{2.5}: CTs are exclusively fired
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		with pipeline quality natural gas and limited to 5 percent opacity during routine operation. The applicant noted that no add-on control technologies are listed in the TCEQ guidelines or EPA RBLC database to meet BACT for particulate matter emissions from natural gas combustion turbines. GHG as CO₂e: The CTs are exclusively fired with pipeline quality natural gas. The total gross thermal efficiency for the CTs initially proposed was 1,434 lb CO₂/MWh, which has been adjusted to account for performance variability and degradation. This standard is on a 12-month rolling average. As mentioned above, these turbines are not subject to NSPS TTTT or NSPS TTTTa, therefore the total gross thermal efficiency requirements of these subparts are not applicable. MSS: During startup or shutdown periods, higher NO_x emissions may be produced during the transition of the combustors from the diffusion flame mode to full low-NO_x (lean premix) operation. Higher VOC and CO emissions are expected during startup/shutdown due to incomplete combustion as the unit transitions to the lean premix operating mode. During startup, higher-than-normal opacity may be experienced. Planned startups and shutdowns are limited to a maximum of 182.5 hours of startup and 182.5 hours of shutdown total for both turbines on a rolling 12-month period. MPH based these hours are based on limiting an individual startup to 30 minutes and an individual shutdown to 30 minutes. Opacity will not exceed 15 percent during startup or shutdown periods. The proposed BACT for the turbines meet the TCEQ Tier I guidelines and is consistent with the RBLC searches.
Equipment/Piping Fugitives	FUG	VOC: Equipment leak fugitives for metering, compression, and piping components in natural gas service were estimated using the Oil and Gas Production Operation average emission factors.

		The uncontrolled site-wide VOC emissions from fugitive sources are less than 10 tpy. No LDAR monitoring is required.
Lube Oil Vents 1-4 and 8-9	LOV-1, LOV-2, LOV-3, LOV-4, LOV-8, and LOV-9	VOC and PM: Emissions are generated from the lubrication oil feed system, and emissions of condensed droplets will be controlled by a mist eliminator serving the lube oil reservoir. Emissions are estimated based on an assume daily volumetric emission rate per mist eliminator and the lube oil replacement rates for similar units equipped with mist eliminators. Lube oil vent emissions are counted both as VOC and particulate matter. It is assumed that lube oil mist eliminator vents will emit equal to or less than 0.03 gallons per day of lube oil per vent, based on oil consumption for similar units. The TCEQ does not provide Tier 1 BACT guidelines for lube oil vent emissions, and there is no process code in the RBLC database associated with lube oil vents. The applicant proposed to control the lube oil vent emissions with oil mist eliminators to satisfy BACT for PM/PM₁₀/PM_{2.5} and VOC, which is being deemed valid due to the low emission rates noted above. This is consistent with the BACT accepted for FPEC, LLC Permit Nos. 173582, PSDTX1626, and GHGPSDTX233.
Planned Maintenance	MSSFUG	These emissions occur from the following MSS ILE activities: • miscellaneous PM filter maintenance activities where baghouses and air intake filters or turbines need to be replaced; • CEMS analyzer and other process instrument calibrations, inspections, repair, replacement, and testing, including other sight glasses, gauges, meters, etc; • Small equipment and fugitive component repair/replacement in VOC service, including pumps, compressors, valves, pipes, flanges, transport lines, filters/screens in natural gas service, diesel oil service, lube oil service; and • Gaseous fuel venting

		Good engineering design and operating practices are used to minimize impacts associated with ILE activities. ILE activities are revalidated annually.
Heaters 1-4 and 8-9	HTR-1, HTR-2, HTR-3, HTR-4, HTR-8, and HTR-9	Natural gas-fired auxiliary fuel gas heaters rated at 6 MMBtu/hr (HHV) will be operated to heat the incoming natural gas fuel to prevent freezing of the gas regulating valves under certain gas operating conditions and to ensure moisture does not form in the inlet gas line. The heaters are current to the turbines to be relocated from Will County, Illinois. NO_x: Emission factor of 0.049 lb/MMBtu on a 3-hr average based on AP-42 emission factors achieved by use of low-NO_x burners. The Applicant represented this as BACT. In support of the BACT determination, MPH provided an analysis which concluded that retrofitting the turbines with new heaters is technically infeasible. Per the current heater manufacturer due to design constraints, retrofitting the existing heaters to meet Tier 1 BACT would require replacing the heaters in their entirety. Additionally, MPH provided a cost analysis which concluded that purchasing new heaters is economically infeasible. The cost analysis shows that the cost effectiveness in dollars per ton (\$/ton) is \$107,545 /ton/turbine. CO: Exhaust concentration of 111 ppmvd at 3% O₂ on a 3-hr average, which is equivalent to an emission factor of 0.082 lb/MMBtu (HHV) based on AP-42 emission factors achieved by proper operation and maintenance of the heater. The Applicant represented this as BACT. In support of the BACT determination, MPH provided an analysis which concluded that retrofitting the turbines with new heaters is technically infeasible, per the current heater manufacturer due to design constraints, retrofitting the existing heaters to meet Tier 1 BACT would require replacing the heaters in their entirety. Additionally, MPH provided a cost

		analysis which concluded that purchasing new heaters is economically infeasible. The cost analysis shows that the cost effectiveness in dollars per ton (\$/ton) is \$45,187 /ton/turbine. VOC: Emission factor of 0.0054 lb/MMBtu PM/PM₁₀/PM_{2.5}: 0.008 lb/MMBtu based on AP-42 using good combustion practices, firing pipeline quality natural gas, and proper operation and maintenance of the heater. The opacity will not exceed 5%. The TCEQ Tier I BACT for natural gas fired heaters less than 40 MMBtu/hr is a maximum opacity 5%. The proposed BACT for PM/PM₁₀/PM_{2.5} is consistent with the applicant's RBLC searches for heaters. SO₂: BACT was represented as application of good combustion practices and firing pipeline-quality natural gas with a natural gas sulfur content not to exceed 0.5 grain/100 dscf, exceeding TCEQ Tier I BACT for natural gas fired heaters less than 40 MMBtu/hr is firing pipeline quality sweet natural gas with 5 grains sulfur/100 dscf. MSS: Separate planned MSS emissions are not being authorized for the fuel heater. The applicant represented that they will minimize the duration and frequency of MSS activities.
Emergency Generator Engine	GEN-1	The 1,881 hp emergency generator meets EPA Tier 2 emission levels required by NSPS Subpart IIII. The emergency generator fires only ultra-low sulfur diesel fuel with a maximum sulfur content of 15 ppm. The emergency generator will operate up to 100 hours per year for non-emergency operation, including maintenance checks and readiness testing. It is equipped with a non-resettable runtime meter. The emergency generator meets an emission limit of 113.51 tpy CO_{2e}.
Emergency Diesel Fire Pump	FWP-1	The emergency fire pump fires only ultra-low sulfur diesel fuel with a maximum sulfur content of 15 ppm. The emergency fire pump will operate up to 100 hours per year for non-emergency operation, including maintenance checks and readiness testing. It is equipped with a non-resettable runtime meter. The

		emergency generator meets an emission limit of 15.17 tpy CO ₂ e.
Emergency Generator Diesel Tank	GENTK-1	These fixed roof storage tanks store diesel or lube oil. The diesel tanks are horizontal fixed roof tanks. The lube oil tanks are vertical fixed roof tanks. These tanks are equipped with bottom fill or submerged fill and have exterior surfaces painted white. All tanks store chemicals with below 0.5 psia true vapor pressure or the tank is less than 25,000 gallons in size. Therefore, vapors from storage of chemicals are routed to the atmosphere.
Emergency Fire Pump Diesel Tank	FWPTK-1	
Lube Oil Tanks 1-4 and 8-9	LOTK-1, LOTK-2, LOTK-3, LOTK-4, LOTK-8, LOTK-9	
SF ₆ Fugitives	FUG-SF	Fugitive emissions from the circuit breakers are due to SF ₆ leakage. SF ₆ is used in high voltage electrical equipment as an insulator and/or arc quenching medium. Up to 9 circuit breakers will be used. State-of-the-art enclosed pressure SF ₆ circuit breakers with leak detection are used to minimize leaks of SF ₆ . Use of good operations and preventative maintenance practices are employed. The circuit breakers meet a total emission limit of 122 tpy CO ₂ e.

VII. Air Quality Analysis

The air quality analysis (AQA) is acceptable for all review types and pollutants. The results are summarized below.

A. De Minimis Analysis

A De Minimis analysis was initially conducted to determine if a full impacts analysis would be required. The De Minimis analysis modeling results indicate that 1-hr NO₂, annual NO₂, 24-hr PM_{2.5}, annual PM_{2.5}, and 24-hr PM₁₀ exceed the respective de minimis concentrations and require a full impacts analysis. The De Minimis analysis modeling results for 1-hr CO, 8-hr CO, 8-hr ozone, and annual PM₁₀ indicate that the project is below the respective de minimis concentrations and no further analysis is required.

The justification for selecting EPA's interim 1-hr NO₂ De Minimis level is based on the assumptions underlying EPA's development of the 1-hr NO₂ De Minimis level. As explained in EPA guidance memoranda¹, EPA believes it is reasonable as an

¹ www.tceq.texas.gov/assets/public/permitting/air/memos/guidance_1hr_no2naaqs.pdf

interim approach to use a De Minimis level that represents 4% of the 1-hr NO₂ National Ambient Air Quality Standards (NAAQS).

The PM_{2.5} and ozone De Minimis levels are EPA recommended De Minimis levels. The use of EPA recommended De Minimis levels is sufficient to conclude that a proposed source will not cause or contribute to a violation of an ozone and PM_{2.5} NAAQS or PM_{2.5} Prevention of Significant Deterioration (PSD) increments based on the analyses documented in EPA guidance and policy memoranda².

While the De Minimis levels for both the NAAQS and increment are identical for PM_{2.5} in the table below, the procedures to determine significance (that is, predicted concentrations to compare to the De Minimis levels) are different. This difference occurs because the NAAQS for PM_{2.5} are statistically-based, but the corresponding increments are exceedance-based.

**Table 1. Modeling Results for PSD De Minimis Analysis
 in Micrograms Per Cubic Meter (µg/m³)**

Pollutant	Averaging Time	GLCmax ³ (µg/m ³)	De Minimis (µg/m ³)
PM ₁₀	24-hr	6.6	5
PM ₁₀	Annual	0.7	1
PM _{2.5} (NAAQS)	24-hr	3.5	1.2
PM _{2.5} (NAAQS)	Annual	0.6	0.13
PM _{2.5} (Increment)	24-hr	4.1	1.2
PM _{2.5} (Increment)	Annual	0.7	0.13
NO ₂	1-hr	74	7.5
NO ₂	Annual	3	1
CO	1-hr	538	2000
CO	8-hr	268	500

The 24-hr and annual PM_{2.5} (NAAQS), and 1-hr NO₂ GLCmax are based on the highest five-year averages of the maximum predicted concentrations determined for each receptor. The GLCmax for all other pollutants and averaging times represent the maximum predicted concentrations over five years of meteorological data.

² www.tceq.texas.gov/permitting/air/modeling/epa-mod-guidance.html

³ Ground level maximum concentration

EPA intermittent guidance was relied on for the 1-hr NO₂ PSD De Minimis analysis. Refer to the Modeling Emissions Inventory section for details.

To evaluate secondary PM_{2.5} impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with EPA's Guideline on Air Quality Models (GAQM). Specifically, the applicant used a Tier 1 demonstration tool developed by EPA referred to as Modeled Emission Rates for Precursors (MERPs)⁴. The basic idea behind MERPs is to use technically credible air quality modeling to relate precursor emissions and peak secondary pollutants impacts from a source. Using data associated with the worst-case source, the applicant estimated 24-hr and annual secondary PM_{2.5} concentrations of 0.432 µg/m³ and 0.0174 µg/m³, respectively. Since the combined direct and secondary 24-hr and annual PM_{2.5} impacts are above the De Minimis levels, a full impacts analysis is required.

Table 2. Modeling Results for Ozone PSD De Minimis Analysis in Parts per Billion (ppb)

Pollutant	Averaging Time	GLCmax (ppb)	De Minimis (ppb)
O ₃	8-hr	0.98	1

The applicant performed an O₃ analysis as part of the PSD AQA. The applicant evaluated project emissions of O₃ precursor emissions (NO_x and VOC). For the project NO_x and VOC emissions, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with EPA's GAQM. Specifically, the applicant used a Tier 1 demonstration tool developed by EPA referred to as MERPs. Using data associated with the Guadalupe County source, the applicant estimated an 8-hr O₃ concentration of 0.98 ppb. When the estimates of ozone concentrations from the project emissions are added together, the results are less than the De Minimis level.

B. Air Quality Monitoring

The De Minimis analysis modeling results indicate that all pollutants and averaging times are below their respective monitoring significance level.

Table 3. Modeling Results for PSD Monitoring Significance Levels

Pollutant	Averaging Time	GLCmax (µg/m ³)	Significance (µg/m ³)
PM ₁₀	24-hr	6.6	10
NO ₂	Annual	3	14
CO	8-hr	268	575

⁴ https://www.epa.gov/sites/default/files/2020-09/documents/epa-454_r-19-003.pdf

The GLCmax represent the maximum predicted concentrations over five years of meteorological data.

The applicant evaluated ambient PM_{2.5} monitoring data to satisfy the requirements for the pre-application air quality analysis.

Background concentrations for PM_{2.5} was obtained from EPA AIRS monitor 480911088 located at 3350 Oak Run Parkway, New Braunfels, Comal County. The three-year average (2021-2023) of the 98th percentile of the annual distribution of the 24-hr concentrations was used for the 24-hr value (21 µg/m³). The three-year average (2021-2023) of the annual average concentrations was used for the annual value (7.5 µg/m³). The 2024 monitoring data was not used since the second and the third quarters for 2024 monitoring data are incomplete with more than 50% of the third quarter monitoring data missing. The use of this monitor is reasonable based on a comparison of county-wide emissions, population, and a quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site. The background concentrations were also used for full NAAQS analyses.

Since the project has a net emissions increase of 100 tpy or more of VOC or NO_x, the applicant evaluated ambient O₃ monitoring data to satisfy the requirements for the pre-application air quality analysis.

A background concentration for O₃ was obtained from EPA AIRS monitor 480211612 located at 25 American Legion Dr., Bastrop, Bastrop County. A three-year average (2022-2024) of the annual fourth highest daily maximum 8-hr concentrations was used in the analysis (66 ppb). The use of this monitor is reasonable based on a quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site.

C. National Ambient Air Quality Standards (NAAQS) Analysis

The De Minimis analysis modeling results indicate that 1-hr NO₂, annual NO₂, 24-hr PM_{2.5}, annual PM_{2.5}, and 24-hr PM₁₀ exceed the respective de minimis concentrations and require a full impacts analysis. The full NAAQS modeling results indicate the total predicted concentrations will not result in an exceedance of the NAAQS.

Table 4. Total Concentrations for PSD NAAQS (Concentrations > De Minimis)

Pollutant	Averaging Time	GLCmax (µg/m ³)	Background (µg/m ³)	Total Conc. = [Background + GLCmax] (µg/m ³)	Standard (µg/m ³)
PM ₁₀	24-hr	7	63	70	150
PM _{2.5}	24-hr	5	21	26	35
PM _{2.5}	Annual	1.3	7.5	8.8	9

NO ₂	1-hr	117	64	181	188
NO ₂	Annual	5	9	14	100

The 24-hr PM₁₀ GLCmax is the maximum high, sixth high predicted concentration over five years of meteorological data.

The 24-hr PM_{2.5} GLCmax is the highest five-year average of the 98th percentile of the annual distribution of predicted 24-hr concentrations determined for each receptor.

The annual PM_{2.5} GLCmax is the maximum five-year average of the annual concentrations determined for each receptor.

The 1-hr NO₂ GLCmax is the highest five-year average of the 98th percentile of the annual distribution of predicted daily maximum 1-hr concentrations determined for each receptor.

The annual NO₂ GLCmax is the maximum predicted concentration over five years of meteorological data.

A background concentration for PM₁₀ was obtained from EPA AIRS monitor 480911088 located at 3350 Oak Run Parkway, New Braunfels, Comal County. The highest monitored concentration from 2022-2024 was used for the 24-hr value. The use of this monitor is reasonable based on a comparison of county-wide emissions, population, and a quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site.

Background concentrations for NO₂ were obtained from EPA AIRS monitor 480290059 located at 14620 Laguna Rd., San Antonio, Bexar County. The three-year average (2022-2024) of the 98th percentile of the annual distribution of the daily maximum 1-hr concentrations was used for the 1-hr value. The annual concentration from 2024 was used for the annual value. The background concentrations used by the applicant are less than the design values reported by EPA. The EPA design values are reported in Table 4 above. The use of this monitor is reasonable based on the applicant's quantitative review of emissions sources in the surrounding area of the monitor site relative to the project site.

As stated above, to evaluate secondary PM_{2.5} impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with EPA's GAQM. Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as MERPs. Using data associated with the worst-case source, the applicant estimated 24-hr and annual secondary PM_{2.5} concentrations of 0.432 µg/m³ and 0.0174 µg/m³, respectively. When these estimates are added to the GLCmax listed in Table 4 above, the results are less than the NAAQS.

D. Increment Analysis

The De Minimis analysis modeling results indicate that annual NO₂, 24-hr PM_{2.5}, annual PM_{2.5}, and 24-hr PM₁₀ exceed the respective de minimis concentrations and require a PSD increment analysis.

Table 5. Results for PSD Increment Analysis

Pollutant	Averaging Time	GLCmax (µg/m ³)	Increment (µg/m ³)
PM ₁₀	24-hr	7	30
PM _{2.5}	24-hr	7.3	9
PM _{2.5}	Annual	1.4	4
NO ₂	Annual	5	25

The GLCmax for the 24-hr PM_{2.5} and 24-hr PM₁₀ is the maximum high, second high predicted concentration across five years of meteorological data.

For annual NO₂ and annual PM_{2.5}, the GLCmax represents the maximum predicted concentration over five years of meteorological data.

The GLCmax for 24-hr and annual PM_{2.5} reported in the table above represent the total predicted concentrations associated with modeling the direct PM_{2.5} emissions and the contributions associated with secondary PM_{2.5} formation (discussed above in the NAAQS Analysis section).

E. Additional Impacts Analysis

The applicant performed an Additional Impacts Analysis as part of the PSD AQA. The applicant conducted a growth analysis and determined that population will not significantly increase as a result of the proposed project. The applicant conducted a soils and vegetation analysis and determined that all evaluated criteria pollutant concentrations are below their respective secondary NAAQS. The applicant meets the Class II visibility analysis requirement by complying with the opacity requirements of 30 Texas Administrative Code Chapter 111. The Additional Impacts Analyses are reasonable and possible adverse impacts from this project are not expected.

ADMT evaluated predicted concentrations from the proposed project to determine if emissions could adversely affect a Class I area. The nearest Class I area, Wichita Mountains, is located approximately 517 kilometers (km) from the proposed site.

The H₂SO₄ 24-hr maximum predicted concentration of 1 µg/m³ occurred approximately 170 meters from the property line towards the south. The H₂SO₄ 24-hr maximum predicted concentration occurring at the edge of the receptor grid, 50 km from the proposed sources, in the direction of the Wichita Mountains Class I area is 0.01 µg/m³. The Wichita Mountains Class I area is an additional 467 km from the edge of the receptor grid. Therefore, emissions of H₂SO₄ from the

proposed project are not expected to adversely affect the Wichita Mountains Class I area.

The predicted concentrations of PM₁₀, PM_{2.5}, NO₂, and SO₂ for all averaging times, are all less than de minimis levels at a distance of four km from the proposed sources in the direction the Wichita Mountains Class I area. The Wichita Mountains Class I area is an additional 513 km from the location where the predicted concentrations of PM₁₀, PM_{2.5}, NO₂, and SO₂ for all averaging times are less than de minimis. Therefore, emissions from the proposed project are not expected to adversely affect the Wichita Mountains Class I area.

F. Minor Source NSR and Air Toxics Review

Table 6. Project-Related Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m ³)	De Minimis (µg/m ³)
SO ₂	1-hr	2	20.4

Table 7. Site-Wide Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m ³)	Standard (µg/m ³)
H ₂ SO ₄	1-hr	5	50
H ₂ SO ₄	24-hr	1	15

Table 8. Modeling Results for Minor NSR De Minimis

Pollutant	Averaging Time	GLCmax (µg/m ³)	De Minimis (µg/m ³)
SO ₂	1-hr	2	7.8
SO ₂	Annual	0.03	1

The GLCmax are the maximum predicted concentrations associated with one year of meteorological data.

The justification for selecting EPA's interim 1-hr SO₂ De Minimis level was based on the assumptions underlying EPA's development of the 1-hr SO₂ De Minimis level. As explained in EPA guidance memoranda⁵, EPA believes it is reasonable as an interim approach to use a De Minimis level that represents 4% of the 1-hr SO₂ NAAQS.

Table 9. Minor NSR Project (Increases Only) Modeling Results for Health Effects

⁵ www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf

Pollutant & CAS# ⁶	Averaging Time	GLCmax (µg/m ³)	10% ESL ⁷ (µg/m ³)
lubricating oils, petroleum, hydrotreated, spent 64742-58-1	1-hr	32	100
diesel fuel 68334-30-5	1-hr	2	100

Table 10. Minor NSR Production Project-Related Modeling Results for Health Effects

Pollutant & CAS#	Averaging Time	GLCmax (µg/m ³)
natural gasoline 68425-31-0	1-hr	17

Table 11. Minor NSR MSS Project-Related Modeling Results for Health Effects

Pollutant & CAS#	Averaging Time	GLCmax (µg/m ³)
natural gasoline 68425-31-0	1-hr	635

Natural gasoline was further evaluated at step 6 of the Modeling and Effects Review Applicability (MERA) guidance.

G. Greenhouse Gases

EPA has stated that unlike the criteria pollutants for which EPA has historically issued PSD permits, there is no National Ambient Air Quality Standard (NAAQS) for GHGs, including no PSD increment. The global climate-change inducing effects of GHG emissions, according to the “Endangerment and Cause or Contribute Finding”, are far-reaching and multi-dimensional (75 FR 66497). Climate change modeling and evaluations of risks and impacts are typically conducted for changes in emissions that are orders of magnitude larger than the emissions from individual projects that might be analyzed in PSD permit reviews. Quantifying the exact impacts attributable to a specific GHG source obtaining a permit in specific places and points would not be possible [EPA’s PSD and Title V Permitting Guidance for GHGs at 48]. Thus, EPA has concluded in other GHG PSD permitting actions it would not be meaningful to evaluate impacts of GHG emissions on a local community in the context of a single permit.

The TCEQ has determined that an air quality analysis would provide no meaningful data and has not required the applicant to perform one. As stated in the preamble to TCEQ’s adoption of the GHG PSD program, the impacts review for individual air contaminants will continue to be addressed, as applicable, in the state’s traditional minor and major NSR permits program per 30 TAC Chapter 116.

⁶ Chemical Abstract Service Number

⁷ Effects Screening Level

I. Conclusion

As described above, the applicant has demonstrated that the project meets all applicable rules, regulations and requirements of the State of Texas and the Federal Clean Air Act. The Executive Director's preliminary determination is that the permits should be issued.