

# Source Impact Modeling Analysis – Gas Treatment Plant PSD Construction Permit No. AQ1524CPT02

**September 12, 2025** 

3041-AIR-RTA-00002

Alaska LNG Project 8 Star Alaska, LLC www.alaska-Ing.com

### Source Impact Modeling Analysis – Gas Treatment Plant PSD Construction Permit No. AQ1524CPT02

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# REVISION HISTORY

Rev	Date	Description	Originator	Reviewer	Approver
0	9/12/2025	For Use	ALG/EXP	Lisa Haas	Adam Prestidge
Approver Signature*		12 Dg			

<sup>\*</sup>This signature approves the most recent version of this document.

#### **MODIFICATION HISTORY**

Rev	Section	Modification

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#### **ACRONYMS AND ABBREVIATIONS**

AAAQS	.Alaska Ambient Air Quality Standard
ADEC	.Alaska Department of Environmental Conservation
AGDC	.Alaska Gasline Development Corporation
CCP	.Central Compressor Plant
CGF	.Central Gas Facility
EPA	.Environmental Protection Agency
GTP	.Gas Treatment Plant
PVMRM	.Plume Volume Molar Ratio Method
SIL	.Significant Impact Level
TAR	.Technical Analysis Report

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#### **EXECUTIVE SUMMARY**

The Alaska Gasline Development Corporation (AGDC) submitted Air Quality Construction Permit Application (Permit No. AQ1524CPT02) for the Alaska LNG Gas Treatment Plan (GTP). The purpose of the application was to obtain Alaska Department of Environmental Conservation (ADEC) approval of an extension for the existing construction permit (Permit No. AQ1524CPT01), and to request ADEC grant a new permit for the GTP facilities. The permit and request were subsequently transferred to 8 Star Alaska, LLC (8 Star).

In response to the application, ADEC requested an update to the source impact modeling analyses conducted for the permit issued in 2020. The dispersion modeling analyses were updated using inputs and methodology used by ADEC for the existing permit with the following updates/changes:

- Current versions of AERMET and AERMOD were used;
- More recent meteorological data and background pollutant concentrations were considered and used in the analysis; and
- Emission rates for offsite sources were updated based on the most recent actual emissions data available.

Updated analyses confirmed that all modeled pollutant concentrations remain below the applicable ambient air quality standard and associated Class II increments. No significant differences from the prior modeling analyses performed in 2020 were identified.

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#### 1. INTRODUCTION

On February 10, 2025, the Alaska Gasline Development Corporation (AGDC) submitted the Air Quality Construction Permit Application (Permit No. AQ1524CPT02) for the Alaska LNG Gas Treatment Plan (GTP). The purpose of the submittal was to obtain Alaska Department of Environmental Conservation (ADEC) approval of an extension for the existing construction permit (Permit No. AQ1524CPT01), and to request ADEC grant a new permit for the GTP facilities. The permit and request were subsequently transferred to 8 Star Alaska, LLC (8 Star). On February 12, 2025, ADEC granted the extension of the permit, and began processing/preparing the new Construction Permit.

On February 25, 2025, ADEC requested an update to the prior source impact analyses using newer EPA and ADEC guidance and tools. Since the prior analyses were prepared between 2017 and 2020, ADEC requested a "refresh" of the analyses to inform potential issuance of the new Construction Permit.

The source impact analysis prepared for the Construction Permit issued on August 13, 2020 was updated as requested by ADEC, and is summarized in this report. The modeling techniques used in the update were identical to those that were used in ADEC's prior analysis, unless otherwise specified in this report. ADEC's prior evaluation is summarized in Sections 5 (modeling approach and methodology) and 6 (modeling results) of the Technical Analysis Report (TAR). The TAR is incorporated by reference in this report.

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Alaska Department of Environmental Conservation, Air Permit Program. August 13, 2020. Review of AGDC's Ambient Demonstration for the Alaska LNG Project's Gas Treatment Plant, Construction Permit AQ1524CPT01.

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#### 2. SOURCE IMPACT ANALYSES

This section describes the modeling approach used for the source impact analyses. Per ADEC guidance, modeling was performed for all pollutants and averaging periods where original modeling showed an exceedance of the respective Significant Impact Level (SIL). The approach was to rerun the model using identical inputs and methodology but with updated versions of the model, meteorological data, and background pollutant concentrations. In addition, emission rates for offsite sources were updated based on the most recent actual emissions data available.

The pollutants included in the updated modeling, and their respective averaging periods that exceeded the SIL, are shown in Table 1.

**Pollutant Averaging Period** AAAQS Class II Increment h8h 1-hr  $NO_2$ HY Annual HY PM-10 24-hr h6h h2h PM-2.5 24-hr h8h h2h 1-hr h4h h2h h2h  $SO_2$ 3-hour 24-hr h2h h2h

**Table 1: Pollutants Modeled** 

#### **Table Notes:**

h2h = the maximum high second-high concentration from any year.

h4h = the multi-year average of the high fourth-high daily maximum 1-hour concentrations.

h6h = the high sixth-high 24-hour concentration over five years.

h8h = high eighth-high. For purposes of 1-hour NO<sub>2</sub>, the h8h is the five-year average of the high, eighth-high of the daily maximum 1-hour NO<sub>2</sub> concentrations. For purposes of 24-hour PM-2.5, the h8h is the five-year average of the high, eighth-high of the 24-hour PM-2.5 concentrations.

HY = highest annual average from any year.

-- = there is no AAAQS/increment (as applicable) for this pollutant/averaging period.

#### 2.1. Model Selection

The original modeling performed by ADEC used EPA's AERMOD Modeling System (AERMOD), version 15181. Met data for that modeling was processed using AERMET, version 15181. For the updated modeling, the current version 24142 was used for both AERMOD and AERMET.

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#### 2.2. Meteorological Data

The original modeling used a five-year dataset based on surface data collected at the A-Pad monitoring station for the years 2009-2013 with concurrent upper air data from the nearest NWS upper air station, which is located in Utqiagvik (formerly known as Barrow). ADEC policy requires the use of meteorological data sets within a reasonable 10-year recency for use in permit applications and other modeling demonstrations. For consistency with prior modeling, the most recent available meteorological data from the same sites was requested from ADEC. ADEC provided raw and preprocessed data from the same sites for the five years 2015-2017 and 2019-2020. The data was reviewed and found to meet data capture requirements and therefore was determined acceptable for use in this modeling project.

A wind rose for the 5-year dataset is provided in Appendix A. Data recovery is provided in Appendix B.

#### 2.3. Emission Rates

For GTP sources, the modeling for this project used emission rates identical to those used in the original ADEC modeling. For the offsite sources (Central Compressor Plant and Central Gas Facility), 2023 actual emission rates per the ADEC Point Source Emission Inventory were used with the exception of emissions from emergency generators and emergency firewater pumps. The emission rates used for the emergency engines in the original modeling were also used for the updated modeling work. The 2023 emission rates for the offsite sources are provided in Appendix C.

#### 2.4. NO<sub>2</sub> Modeling

Modeling for NO<sub>2</sub> followed the same procedures and techniques that were followed in the original modeling with updates where appropriate. As in the original ADEC modeling, PVMRM was used in the conversion from NOx to NO<sub>2</sub>. In the original modeling, PVMRM was an "alternative" technique (a beta option) that required approval on a case-by-case basis. In version 24142 of AERMOD, PVMRM is one of the default options. The same hourly background ozone data used in the original modeling was also used for the updated modeling, with the years in the original file adjusted to match the new meteorological data set. The same in-stack NO<sub>2</sub>-to-NOx ratios were used but the background NO<sub>2</sub> concentrations were updated based on data provided by ADEC for the years 2015, 2016, 2019, 2020, and 2021. NO<sub>2</sub> background concentrations varied by windspeed using the same approach described in Section 5.15 of the TAR; Table 2 compares the background NO<sub>2</sub> concentrations used in the original modeling and the updated modeling for this project.

State of Alaska Department of Environmental Conservation, Temporal Requirements for Modeling Data Set Utilization, May 1, 2024.

Retrieved from: https://dec.alaska.gov/Applications/Air/airtoolsweb/PointSourceEmissionInventory. Accessed June 27, 2025.

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Table 2: Background NO<sub>2</sub> Concentrations for Hourly Modeling

Wind Speed (Ws)	NO <sub>2</sub> Concentration (ppbv)			
Category (m/s)	Original ADEC Modeling	Current Project Modeling		
Ws < 1.54	25.9	14.5		
1.54 ≤ Ws < 3.09	22.3	16.9		
3.09 ≤ Ws < 5.14	15.9	18.5		
5.14 ≤ Ws < 8.23	10.3	13.27		
8.23 ≤ Ws < 10.8	10.7	9.7		
Ws ≥ 10.8	13.4	13.4		

#### 2.5. Background Ambient Air Data

Updated background ambient air data for this modeling analysis was provided by ADEC. The hourly background NO<sub>2</sub> data used in the hourly NO<sub>2</sub> modeling is described in Section 2.4 above and is added directly to the hourly NO<sub>2</sub> concentrations within AERMOD. Background concentrations for other pollutants and averaging periods are added to modeled concentrations manually. Those background values are shown in Table 3 below.

**Table 3: Background Pollutant Concentrations** 

Pollutant	Averaging Period	Ambient Air Concentration	
NO <sub>2</sub>	Annual	7.0 ppb (13.2 ug/m <sup>3</sup> )	
PM-10	24-hr 2 <sup>nd</sup> High	40 ug/m <sup>3</sup>	
PM-2.5	98 <sup>th</sup> Percentile of 24-hr concentration	7 ug/m³	
	99 <sup>th</sup> Percentile of Daily Max 1-hr concentration	8.5 ppb (22.3 ug/m <sup>3</sup> )	
SO <sub>2</sub>	3-hr 2 <sup>nd</sup> High	0.0 ppb (0.0 ug/m³)	
	24-hr 2 <sup>nd</sup> High	40 ug/m <sup>3</sup>	

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#### 3. MODELING RESULTS

Modeling results for the cumulative AAAQS and increment modeling are shown in Tables 4 and 5 below. As was shown in the original ADEC modeling, modeled concentrations are below the AAAQS less than the Class II increment for all pollutants and averaging periods. Modeling files will be submitted under separate cover. A list of modeling files generated for this project is provided in Appendix D.

**Table 4: Maximum Impacts Compared to the AAAQS** 

Pollutant	Averaging Period	Modeled Conc. (μg/m³)	Background Conc. (µg/m³)	Total Impact (μg/m³)	AAAQS (μg/m³)
NO <sub>2</sub>	1-hr	135.3	Included in model	135.3	188
	Annual	11.4	13.2	24.6	100
PM-10	24-hr	18.7	40.0	58.7	150
PM-2.5	24-hr	14.1	7.0	21.1	35
	1-hr	21.9	22.3	44.2	196
SO <sub>2</sub>	3-hour	23.7	0.0	23.7	1300
	24-hr	15.3	2.6	17.9	365

**Table 5: Maximum Modeled Impacts Compared to the Class II Increments** 

Pollutant	Averaging Period	Modeled Conc. (μg/m³)	Class II Increment (µg/m³)		
NO <sub>2</sub>	Annual	8.5	25		
PM-10	24-hr	9.6	30		
PM-2.5	24-hr	4.2	9		
	3-hour	23.5	512		
SO <sub>2</sub>	24-hr	11.3	91		

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#### 4. CONCLUSION

The results of the updated modeling analysis confirm compliance with all Ambient Air Quality Standards and associated Class II increments. Notably, all modeling results were consistent with the values previously modeled by ADEC in issuing the Construction Permit for the project in 2020.

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#### 5. REFERENCES

- Alaska Department of Environmental Conservation, Air Permit Program. August 13, 2020. Review of AGDC's Ambient Demonstration for the Alaska LNG Project's Gas Treatment Plant, Construction Permit AQ1524CPT01.
- Alaska Department of Environmental Conservation. Point Source Emission Inventory. Retrieved from: https://dec.alaska.gov/Applications/Air/airtoolsweb/PointSourceEmissionInventory. Accessed June 27, 2025.

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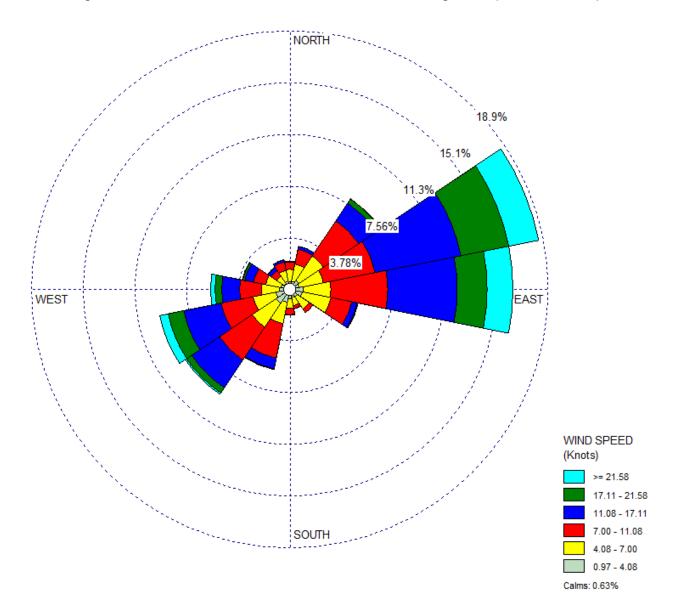
## **APPENDIX A**

Wind Rose from Data Collected at the A-Pad Monitoring Station (2015-16-17-29-20)

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Figure A-1: Wind Rose from Data Collected at the A-Pad Monitoring Station (2015-16-17-29-20)



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## **APPENDIX B**

**Meteorological Data Recovery** 

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Table B-1: Data Capture Rates for the Model-Ready Meteorological Input Data

Time Period	WS02	WD02	SA02	VV02	SV02	TT02	TT01	DT01	INSO
2015 Q1	98.4%	98.4%	98.4%	76.0%	76.0%	99.9%	99.9%	99.9%	97.5%
2015 Q2	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	100.0%
2015 Q3	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	99.9%
2015 Q4	99.7%	99.7%	99.7%	99.7%	99.7%	99.6%	99.6%	99.6%	100.0%
2015 Total	99.5%	99.5%	99.5%	94.0%	94.0%	99.8%	99.8%	99.8%	99.3%
2016 Q1	95.6%	95.6%	95.6%	97.1%	97.1%	99.3%	99.3%	99.3%	98.8%
2016 Q2	99.6%	99.6%	99.6%	99.6%	99.8%	99.6%	99.6%	99.6%	99.8%
2016 Q3	98.3%	98.3%	98.3%	98.4%	98.4%	98.4%	98.4%	98.4%	98.4%
2016 Q4	93.7%	93.7%	93.7%	89.0%	89.3%	99.0%	99.0%	99.0%	99.3%
2016 Total	96.8%	96.8%	96.8%	96.0%	96.1%	99.1%	99.1%	99.1%	99.1%
2017 Q1	97.2%	97.2%	97.2%	97.1%	97.1%	99.2%	99.2%	99.2%	98.1%
2017 Q2	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	99.8%	98.8%
2017 Q3	99.9%	100.0%	99.9%	99.9%	99.9%	100.0%	100.0%	100.0%	100.0%
2017 Q4	93.5%	93.5%	93.5%	89.9%	89.9%	99.7%	99.7%	99.7%	99.9%
2017 Total	97.6%	97.6%	97.6%	96.7%	96.7%	99.7%	99.7%	99.7%	99.2%
2019 Q1	90.2%	93.2%	90.2%	98.9%	98.9%	99.4%	99.4%	99.4%	100.0%
2019 Q2	98.8%	98.8%	98.8%	98.8%	98.8%	98.8%	98.8%	98.8%	99.7%
2019 Q3	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
2019 Q4	95.3%	95.3%	95.3%	98.4%	98.4%	98.4%	98.4%	98.4%	98.6%
2019 Total	96.1%	96.8%	96.1%	99.0%	99.0%	99.1%	99.1%	99.1%	99.5%
2020 Q1	98.9%	98.9%	98.9%	98.9%	98.9%	98.9%	98.9%	98.9%	98.9%
2020 Q2	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.0%	99.9%
2020 Q3	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2020 Q4	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	99.7%	100.0%
2020 Total	99.4%	99.4%	99.4%	99.4%	99.4%	99.4%	99.4%	99.4%	99.7%

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#### **APPENDIX C**

#### Offsite Source Emission Rates Used in Modeling

Note: Table C-1 below shows the emission rates used in the modeling for offsite sources. Sources not shown in the table were modeled with the emission rates used in the original modeling. Hourly emission rates were based on the annual emission rates divided by the number of hours of operation for each source.

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Table C-1: Offsite Source Emission Rates Used in Modeling

F	Modeling	Emission	Bereitelber	2	2023 Emission Rates (ton/yr)			2023		2023 Emissio	n Rates (lb/hr	)
Facility	Source ID	Unit	Description	NOx	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	Hours	NOx	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
ССР	701	21	TEG Reboiler (Tag No. NGH-21-1503)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ССР	702	22	TEG Reboiler (Tag No. NGH-21-1504)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ССР	703	19	Glycol Heater (Tag No. NGH-21-1501)	1.59E+00	1.18E-01	1.21E-01	6.70E-03	6626	4.80E-01	3.56E-02	3.64E-02	2.02E-03
ССР	704	20	Glycol Heater (Tag No. NGH-21-1502)	5.87E-01	4.35E-02	4.46E-02	1.04E-02	2135	5.50E-01	4.07E-02	4.18E-02	9.74E-03
ССР	801	01	Combustion Turbine Gas Compressor (Tag No. NGT-18-1801)	5.62E+02	1.21E+01	1.09E+01	3.09E-01	8711	1.29E+02	2.77E+00	2.51E+00	7.09E-02
ССР	802	02	Combustion Turbine Gas Compressor (Tag No. NGT-18-1802)	1.11E+01	3.54E+00	1.23E+01	3.14E-01	8745	2.54E+00	8.09E-01	2.80E+00	7.18E-02
ССР	803	03	Combustion Turbine Gas Compressor (Tag No. NGT-18-1803)	5.45E+02	1.17E+01	1.06E+01	2.99E-01	8727	1.25E+02	2.68E+00	2.43E+00	6.85E-02
ССР	804	04	Combustion Turbine Gas Compressor (Tag No. NGT-18-1804)	5.39E+02	1.16E+01	1.05E+01	2.96E-01	8664	1.24E+02	2.67E+00	2.42E+00	6.84E-02
ССР	805	05	Combustion Turbine Gas Compressor (Tag No. NGT-18-1805)	5.11E+02	1.10E+01	9.94E+00	2.81E-01	8146	1.25E+02	2.69E+00	2.44E+00	6.89E-02
ССР	806	06	Combustion Turbine Gas Compressor (Tag No. NGT-18-1806)	5.25E+02	1.16E+01	1.05E+01	2.96E-01	8122	1.29E+02	2.84E+00	2.58E+00	7.28E-02
ССР	807	07	Combustion Turbine Gas Compressor (Tag No. NGT-18-1807)	5.37E+02	1.15E+01	1.05E+01	2.95E-01	8733	1.23E+02	2.64E+00	2.39E+00	6.76E-02
ССР	808	08	Combustion Turbine Gas Compressor (Tag No. NGT-18-1808)	5.31E+02	1.14E+01	1.03E+01	2.92E-01	8744	1.22E+02	2.61E+00	2.37E+00	6.68E-02
ССР	809	09	Combustion Turbine Gas Compressor (Tag No. NGT-18-1809)	5.57E+02	1.19E+01	1.08E+01	3.06E-01	8684	1.28E+02	2.75E+00	2.50E+00	7.05E-02
ССР	810	10	Combustion Turbine Gas Compressor (Tag No. NGT-18-1810)	5.08E+02	1.09E+01	9.89E+00	2.79E-01	8091	1.26E+02	2.69E+00	2.44E+00	6.90E-02

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F	Modeling	eling Emission	Paradata.	2023 Emission Rates (ton/yr)				2023	2023 Emission Rates (lb/hr)			
Facility	Source ID	Unit	Description	NOx	SO <sub>2</sub>	PM <sub>10</sub>	PM2.5	Hours	NOx	SO <sub>2</sub>	PM <sub>10</sub>	PM2.5
ССР	811	11	Combustion Turbine Gas Compressor (Tag No. NGT-18-1811)	5.37E+02	1.15E+01	1.04E+01	2.95E-01	8740	1.23E+02	2.63E+00	2.39E+00	6.74E-02
ССР	812	12	Combustion Turbine Gas Compressor (Tag No. NGT-18-1812)	5.66E+02	1.21E+01	1.10E+01	3.11E-01	8691	1.30E+02	2.79E+00	2.54E+00	7.15E-02
ССР	813	13	Combustion Turbine Gas Compressor (Tag No. NGT-18-1813)	5.65E+02	1.21E+01	2.11E+01	3.10E-01	8714	1.30E+02	2.78E+00	4.84E+00	7.12E-02
ССР	814	17	Glycol Heater (Tag No. NGH-18-1491)	1.73E+00	1.28E-01	1.32E-01	7.40E-03	4031	8.58E-01	6.37E-02	6.52E-02	3.67E-03
ССР	815	18	Glycol Heater (Tag No. NGH-18-1492)	2.39E+00	1.77E-01	1.81E-01	1.02E-02	5310	8.98E-01	6.66E-02	6.82E-02	3.84E-03
ССР	832	16	Glycol Heater (Tag No. NGH-18-1410)	2.00E+00	1.81E-01	1.86E-01	1.04E-02	4923	8.11E-01	7.37E-02	7.55E-02	4.23E-03
ССР	833	14	Combustion Turbine Gas Compressor (Tag No. NGT-18-1876)	5.98E+02	1.23E+01	1.12E+01	3.15E-01	8432	1.42E+02	2.92E+00	2.65E+00	7.47E-02
ССР	834	15	Combustion Turbine Gas Compressor (Tag No. NGT-18-1878)	6.04E+02	1.24E+01	1.13E+01	3.18E-01	8639	1.40E+02	2.87E+00	2.61E+00	7.36E-02
CGF	1101	05	Combustion Turbine Booster Compressor (Tag No. NGI-19-1801)	5.09E+02	8.05E+00	7.30E+00	2.06E-01	8653	1.18E+02	1.86E+00	1.69E+00	4.76E-02
CGF	1102	06	Combustion Turbine Booster Compressor (Tag No. NGI-19-1802)	5.13E+02	8.11E+00	7.35E+00	2.08E-01	8650	1.19E+02	1.87E+00	1.70E+00	4.80E-02
CGF	1103	07	Combustion Turbine MI Compressor (Tag No. NGI-19-1805)	4.57E+02	7.23E+00	6.56E+00	1.85E-01	8587	1.06E+02	1.68E+00	1.53E+00	4.31E-02
CGF	1104	08	Combustion Turbine MI Compressor (Tag No. NGI-19-1855)	4.34E+02	6.86E+00	6.22E+00	1.76E-01	8017	1.08E+02	1.71E+00	1.55E+00	4.38E-02
CGF	1105	09	Combustion Turbine Refrigerant Compressor (Tag No. NGI-19-1806)	2.91E+02	9.20E+00	8.34E+00	2.35E-01	8399	6.92E+01	2.19E+00	1.99E+00	5.61E-02
CGF	1106	10	Combustion Turbine Refrigerant Compressor (Tag No. NGI-19-1856)	2.77E+02	8.76E+00	7.94E+00	2.24E-01	8065	6.87E+01	2.17E+00	1.97E+00	5.56E-02
CGF	1107	12	Hot Oil Heater (Tag No. NGI-19-1401)	3.39E+01	2.28E+00	3.15E+00	1.78E-01	8683	7.80E+00	5.26E-01	7.27E-01	4.11E-02
CGF	1108	13	Hot Oil Heater (Tag No. NGH-19-1402)	3.40E+01	3.09E+00	3.17E+00	1.79E-01	8718	7.80E+00	7.09E-01	7.26E-01	4.11E-02

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Facility	Modeling	g Emission	Unit	2023 Emission Rates (ton/yr)				2023 Hours	2023 Emission Rates (lb/hr)			
Facility	Source ID	Unit		PM <sub>2.5</sub>	NOx	SO <sub>2</sub>	PM <sub>10</sub>		PM2.5			
CGF	1109	14	Hot Oil Heater (Tag No. NGH-19-1403)	2.44E+01	2.22E+00	2.27E+00	1.28E-01	5963	8.18E+00	7.44E-01	7.62E-01	4.31E-02
CGF	1115	11	Combustion Turbine Refrigerant Compressor (Tag No. NGI-19-1857)	3.72E+02	1.18E+01	1.07E+01	3.01E-01	8524	8.72E+01	2.76E+00	2.50E+00	7.06E-02
CGF	1116	3	Combustion Turbine Gas Compressor (Tag No. NGI-19-1885)	8.12E+02	1.49E+01	1.35E+01	3.82E-01	8337	1.95E+02	3.58E+00	3.24E+00	9.15E-02
CGF	1117	1	Combustion Turbine Gas Compressor (Tag No. NGI-19-1883)	8.08E+02	1.48E+01	1.35E+01	3.80E-01	8290	1.95E+02	3.58E+00	3.25E+00	9.17E-02
CGF	1118	4	Combustion Turbine Gas Compressor (Tag No. NGI-19-1886)	8.39E+02	1.54E+01	1.40E+01	3.95E-01	8582	1.96E+02	3.59E+00	3.26E+00	9.20E-02
CGF	1119	2	Combustion Turbine Gas Compressor (Tag No. NGI-19-1884)	8.43E+02	1.55E+01	1.41E+01	3.97E-01	8588	1.96E+02	3.61E+00	3.27E+00	9.24E-02

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## **APPENDIX D**

**Modeling Files** 

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Table D-1: Modeling Files

File Name	Modeling Analysis	Pollutant	Averaging Period	Met Data Years	Standard
NO2_1hr rerun_2015-2020_NO2,DTA, .LST, .GRF	NAAQS/AAAQS	NO <sub>2</sub>	1 hr	2015/16/17/19/20	Five-year average of the high, eighth-high of the daily maximum 1-hour NO2 concentrations.
NO2_Annual rerun 2015_NO2,DTA, .LST, .GRF	NAAQS/AAAQS	NO <sub>2</sub>	Annual	2015	
NO2_Annual rerun 2016_NO2,DTA, .LST, .GRF	NAAQS/AAAQS	NO <sub>2</sub>	Annual	2016	
NO2_Annual rerun 2017_NO2,DTA, .LST, .GRF	NAAQS/AAAQS	NO <sub>2</sub>	Annual	2017	Highest annual average from any year.
NO2_Annual rerun 2019_NO2,DTA, .LST, .GRF	NAAQS/AAAQS	$NO_2$	Annual	2019	inom any year.
NO2_Annual rerun 2020_NO2,DTA, .LST, .GRF	NAAQS/AAAQS	NO <sub>2</sub>	Annual	2020	
PM10_24hr rerun_2015-2020_PM10,DTA, .LST, .GRF	NAAQS/AAAQS	PM <sub>10</sub>	24 hr	2015/16/17/19/20	High sixth-high 24-hour concentration over five years.
PM25_24hr rerun_2015-2020_PM25,DTA, .LST, .GRF	NAAQS/AAAQS	PM <sub>2.5</sub>	24 hr	2015/16/17/19/20	Five-year average of the high, eighth-high of the 24-hour PM-2.5 concentrations.
SO2_1hr rerun_2015-2020_SO2,DTA, .LST, .GRF	NAAQS/AAAQS	SO <sub>2</sub>	1 hr	2015/16/17/19/20	Multi-year average of the high fourth-high daily maximum 1-hour concentrations.
SO2_3hr_24hr rerun 2015_2015-2020_OTHER,DTA, .LST, .GRF	NAAQS/AAAQS	SO <sub>2</sub>	3 hr, 24 hr	2015	
SO2_3hr_24hr rerun 2016_2015-2020_OTHER,DTA, .LST, .GRF	NAAQS/AAAQS	SO <sub>2</sub>	3 hr, 24 hr	2016	Maximum high second-
SO2_3hr_24hr rerun 2017_2015-2020_OTHER,DTA, .LST, .GRF	NAAQS/AAAQS	SO <sub>2</sub>	3 hr, 24 hr	2017	high concentration from
SO2_3hr_24hr rerun 2019_2015-2020_OTHER,DTA, .LST, .GRF	NAAQS/AAAQS	SO <sub>2</sub>	3 hr, 24 hr	2019	any year.
SO2_3hr_24hr rerun 2020_2015-2020_OTHER,DTA, .LST, .GRF	NAAQS/AAAQS	SO <sub>2</sub>	3 hr, 24 hr	2020	

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File Name	Modeling Analysis	Pollutant	Averaging Period	Met Data Years	Standard		
NO2_ann increment rerun 2015_NO2,DTA, .LST, .GRF	PSD increment	NO <sub>2</sub>	Annual	2015			
NO2_ann increment rerun 2016_NO2,DTA, .LST, .GRF	PSD increment	NO <sub>2</sub>	Annual	2016			
NO2_ann increment rerun 2017_NO2,DTA, .LST, .GRF	PSD increment	NO <sub>2</sub>	Annual	2017	Highest annual average from any year.		
NO2_ann increment rerun 2019_NO2,DTA, .LST, .GRF	PSD increment	NO <sub>2</sub>	Annual	2019	- Hom any year.		
NO2_ann increment rerun 2020_NO2,DTA, .LST, .GRF	PSD increment	NO <sub>2</sub>	Annual	2020			
PM10_24hr rerun 2015_2015-2020_OTHER,DTA, .LST, .GRF	PSD increment	PM <sub>10</sub>	24 hr	2015			
PM10_24hr rerun 2016_2015-2020_OTHER,DTA, .LST, .GRF	PSD increment	PM <sub>10</sub>	24 hr	2016	Maximum high second-		
PM10_24hr rerun 2017_2015-2020_OTHER,DTA, .LST, .GRF	PSD increment	PM <sub>10</sub>	24 hr	2017	high concentration from		
PM10_24hr rerun 2019_2015-2020_OTHER,DTA, .LST, .GRF	PSD increment	PM <sub>10</sub>	24 hr	2019	any year.		
PM10_24hr rerun 2020_2015-2020_OTHER,DTA, .LST, .GRF	PSD increment	PM <sub>10</sub>	24 hr	2020			
PM25_24hr rerun 2015_2015-2020_OTHER,DTA, .LST, .GRF	PSD increment	PM <sub>2.5</sub>	24 hr	2015			
PM25_24hr rerun 2016_2015-2020_OTHER,DTA, .LST, .GRF	PSD increment	PM <sub>2.5</sub>	24 hr	2016	Maximum high second-		
PM25_24hr rerun 2017_2015-2020_OTHER,DTA, .LST, .GRF	PSD increment	PM <sub>2.5</sub>	24 hr	2017	high concentration from		
PM25_24hr rerun 2019_2015-2020_OTHER,DTA, .LST, .GRF	PSD increment	PM <sub>2.5</sub>	24 hr	2019	any year.		
PM25_24hr rerun 2020_2015-2020_OTHER,DTA, .LST, .GRF	PSD increment	PM <sub>2.5</sub>	24 hr	2020			
SO2_3hr_24hr rerun 2015_2015-2020_OTHER,DTA, .LST, .GRF	PSD increment	SO <sub>2</sub>	3 hr, 24 hr	2015			
SO2_3hr_24hr rerun 2016_2015-2020_OTHER,DTA, .LST, .GRF	PSD increment	SO <sub>2</sub>	3 hr, 24 hr	2016	Maximum high second-		
SO2_3hr_24hr rerun 2017_2015-2020_OTHER,DTA, .LST, .GRF	PSD increment	SO <sub>2</sub>	3 hr, 24 hr	2017	high concentration from		
SO2_3hr_24hr rerun 2019_2015-2020_OTHER,DTA, .LST, .GRF	PSD increment	SO <sub>2</sub>	3 hr, 24 hr	2019	any year.		
SO2_3hr_24hr rerun 2020_2015-2020_OTHER,DTA, .LST, .GRF	PSD increment	SO <sub>2</sub>	3 hr, 24 hr	2020			