



eni us operating

eni us operating co. inc.
3700 Centerpoint Dr., Suite 500
Anchorage, AK 99503
Tel. 907-865-3300 Fax 907-865-3380

HAND DELIVERY and by E-MAIL

July 22, 2024

Alaska Department of Environmental Conservation
Air Permit Program
Attn: Air Permit Application Intake Clerk
555 Cordova Street
Anchorage, Alaska 99501

Subject: Nikaitchuq Development
Title V Permit No. AQ0923TVP02
Application to Renew Title V Operating Permit

Dear Air Permit Application Intake Clerk,

Eni US Operating Co. Inc. (Eni) is applying for a permit renewal under 40 CFR 71.5 and 18 AAC 50.326 for Air Quality Operating Permit No. AQ0923TVP02 for the Nikaitchuq Development stationary source located on the North Slope of Alaska. Under Condition 103 of the permit, this renewal application is considered timely when submitted no later than July 22, 2024.

Application Organization

The Department's standard Title V operating permit application forms were used where relevant to prepare the renewal application. The application that accompanies this letter contains the following sections:

Form Series A

ADEC Title V Standard Form A1: Stationary Source General Information.

ADEC Title V Standard Form A2: Stationary Source Description. This form of the permit application applies to changes to the Form A2 data. For this application, this section is empty because there are no proposed changes.

ADEC Title V Standard Form A3: Operating Scenario Description. This form of the permit application applies to the operating scenarios for the stationary source. For this application, this section is empty because there are no proposed changes to the base operating scenario for the source.

ADEC Title V Standard Form A4: Title V Air Operating Permit Renewal Application Information. The supporting basis for requested revisions provided in Form E3 (see Form Series E, below) is the primary document that supports Form A4.

Form Series B

ADEC Title V Standard Forms B, B1, B2, B3, B4, and B5: Emission Unit Details. In these forms, all applicable emission unit-specific permit conditions are listed using the condition numbering of the current permit and changes to the emission unit-specific permit shields. Any limits or standards that are currently applicable to the stationary source but not yet included in the permit are also included in the forms as new conditions and clearly identified as such. A list of non-applicable requirements for specific emission units is also included on these forms. These are the requirements for which we request that the Department include a permit table that documents the permit shields granted.

Form Series C

ADEC Title V Standard Form C5: Pollution Control Device. This section of the permit application applies to control devices in use at a stationary source. For this application, this section is empty because there are no control devices in use at this stationary source.

Form Series D

ADEC Title V Standard Form D1 and D2: Emission Unit Summary Forms and Stationary Source Emission Summary Forms, and Emissions Spreadsheets. As allowed per the Department's directions for this form, the emissions spreadsheets in lieu of providing detailed emissions information in Form D1 and D2 are provided. Criteria/GHG and HAP emissions estimates are provided in the Excel spreadsheets included with this application. Stationary source total emissions are summarized for significant and insignificant emission units. Emissions from nonroad engines are not estimated since emissions from nonroad engines are not used to determine the stationary source classification and are not subject to fees.

Form Series E

ADEC Title V Standard Form E1: Stationary Source-Wide Applicable Requirements. This form documents all stationary-wide applicable permit conditions. In this form, we list all stationary source-wide permit conditions using the condition numbering of the current permit. New permit conditions, if applicable, are also included in the form and clearly identified as such.

ADEC Title V Standard Form E2: Permit-to-Operate and Minor Permit Condition Change Request. This form documents any specific requests to revise or remove conditions of an underlying

construction permit. For this application, this section is empty because there are no requested changes.

ADEC Title V Standard Form E3: Title V Condition Change Request. This form documents all proposed/requested permit revisions. The basis for each proposed/requested permit revision is provided in Form E3.

ADEC Title V Standard Form E4: Permit Shield Request. All requested stationary source-wide permit shields included in the proposed permit are presented in this form.

ADEC Title V Standard Form E5: Alternative Monitoring Procedures. The performance test waiver granted by EPA for NSPS Subpart KKKK-affected turbines at Nikaitchuq are summarized in, and attached to, this form.

Other Information

Current Permits. This section includes a copy of current Operating Permit no. AQ0923TVP02 and Minor Permit No. AQ0923MSS11.

Stationary Source Compliance Certification.

Electronic Copy of Application

If you have any questions, please contact me at 907-865-3300 or the application contact Chris Lindsey with SLR International Corporation at 907-264-6916.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Sincerely,



Stephanie Rupert
Production Manager

cc: Kirsten Hoppe, Eni
Nikaitchuq Environmental Coordinator, Eni
Chris Lindsey, SLR

US EPA Region 10, Part 70 Operating Permit Program, M/S OAW-150, 1200 Sixth Avenue, Suite 900, Seattle, WA 98101 (by email)

Enclosure: Title V Operating Permit Renewal Application



Application for Renewal of an Air Quality Title V Operating Permit

Nikaitchuq Development

Eni US Operating Co. Inc.

3700 Centerpoint Drive, Suite 500
Anchorage, AK 99519

Prepared by:

SLR International Corporation

2700 Gambell Street, Suite 200, Anchorage, Alaska, 99503

July 22, 2024

Appendices

Appendix A Stationary Source

- A.1 Form A1: Stationary Source (General Information)
- A.2 Form A4: Title V Air Operating Permit Renewal Application Information
- A.3 Attachment: 2023 Annual Compliance Certification

Appendix B Emission Units

- B.1 Form B: Emission Unit Listing for This Application
- B.2 Form B1: Emission Unit Detail Form – External Combustion Equipment
- B.3 Form B2: Emission Unit Detail Form – Internal Combustion Equipment
- B.4 Form B4: Emission Unit Detail Form – Volatile Liquid Storage Tanks
- B.5 Form B5: Emission Unit Detail Form – Miscellaneous Emission Units

Appendix C Pollution Control Devices – *Not Applicable*

Appendix D Emissions Summary

- D.1 Form D: Emissions Summary

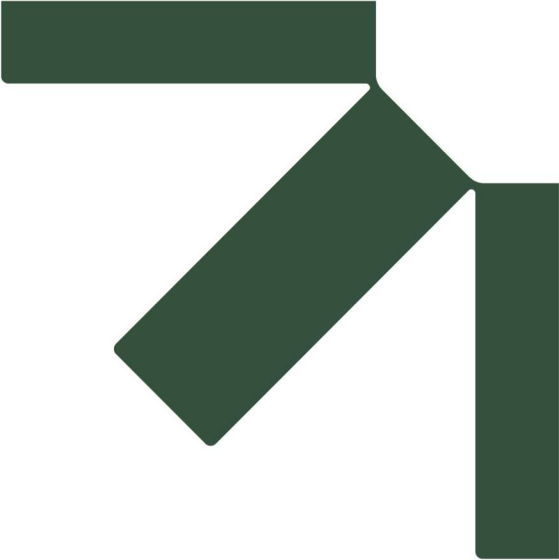
Appendix E Regulatory Requirements

- E.1 Form E1: Stationary Source-Wide Applicable Requirements
- E.2 Form E3: Title V Condition Change Request
- E.3 Form E4: Permit Shield Request
- E.4 Form E5: Alternative Monitoring Procedures (AMP) From
- E.5 Attachment: 2012 EPA Test Waivers

Appendix F Permits

- F.1 Permit No. AQ00923MSS11
- F.2 Permit No. AQ0923TVP02





Appendix A Stationary Source

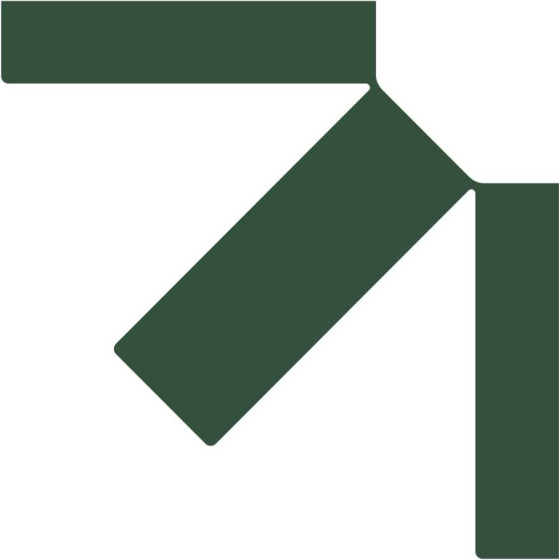
Application for Renewal of an Air Quality Title V Operating Permit

Nikaitchuq Development

Eni US Operating Co. Inc.

July 22, 2024



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- A.1 Form A1: Stationary Source (General Information)**
 - A.2 Form A4: Title V Air Operating Permit Renewal Application Information**
 - A.3 Attachment: 2023 Annual Compliance Certification**

FORM A1

Stationary Source (General Information)

GENERAL INFORMATION			
1. Permittee:			
Permittee Name: <i>Eni US Operating Co. Inc.</i>			
Mailing Address Line 1: 3700 Centerpoint Drive, Suite 500			
Mailing Address Line 2			
City: Anchorage	State: AK	Zip Code: 99503	
2. Stationary Source Name: <i>Nikaitchuq Development</i>			
3. Stationary Source Physical Address:			
Physical Address Line 1: Oliktok Point			
Physical Address Line 2 200 feet southeast of Kuparuk River Unit Seawater Treatment Plant:			
City:	State: AK	Zip Code:	
4. Location:		Latitude: 70° 30' 36.87" N	Longitude: 149° 52' 0.65" W
5. Primary SIC Code: 1311	SIC Code Description: Crude Petroleum and Natural Gas		Primary NAICS Code: 211111 Crude Petroleum and Natural Gas Extraction
6. Current/Previous Title V Air Permit No.: AQ0923TVP02		Expiration Date: January 22, 2025	
7. Does this application contain confidential data?		☐ Yes	☒ No
8. APPLICATION IS BEING MADE FOR:			
☐ Initial Title V Permit for this Stationary Source		☐ Modify Title V Permit (currently permitted)	☒ Title V Permit Renewal
9. CONTACT INFORMATION (Attach additional sheets if needed)			
Owner:		Operator:	
Name/Title: Eni US Operating Co. Inc.		Name/Title: Eni US Operating Co. Inc.	
Mailing Address Line 1: 3700 Centerpoint Drive, Suite 500		Mailing Address Line 1: 3700 Centerpoint Drive, Suite 500	
Mailing Address Line 2		Mailing Address Line 2	
City: Anchorage	State: AK	Zip Code: 99503	City: Anchorage
			State: AK
			Zip Code: 99503
Permittee's Responsible Official:		Designated Agent:	
Name/Title: Stephanie Rupert / SEQ Manager Alaska		Name/Title: Capitol Corporate Services Inc.	
Mailing Address Line 1: 3700 Centerpoint Drive, Suite 500		Mailing Address Line 1: 4318 Conifer Lane.	
Mailing Address Line 2		Mailing Address Line 2	
City: Anchorage	State: AK	Zip Code: 99503	City: Juneau
			State: AK
			Zip Code: 99801
Stationary Source and Building Contact:		Fee Contact:	
Name/Title: Stephanie Rupert / SEQ Manager Alaska		Name/Title: Attn: Accounts Payable Department	
Mailing Address Line 1: 3700 Centerpoint Drive, Suite 500		Mailing Address Line 1: 3700 Centerpoint Drive, Suite 500	
Mailing Address Line 2		Mailing Address Line 2	
City: Anchorage	State: AK	Zip Code: 99503	City: Anchorage
			State: AK
			Zip Code: 99503
Phone: 907-865-3300	Email: stephanie.rupert@eni.com	Phone: 907-865-3300	Email: akaccounts payable@eni.com
Permit Contact:		Person or Firm that Prepared Application:	
Name/Title: Stephanie Rupert / SEQ Manager Alaska		Name/Title: Chris Lindsey / Principal Consultant	
Mailing Address Line 1: 3700 Centerpoint Drive, Suite 500		Mailing Address Line 1: 2700 Gambell Street, Suite 200	
Mailing Address Line 2		Mailing Address Line 2	
City: Anchorage	State: AK	Zip Code: 99503	City: Anchorage
			State: AK
			Zip Code: 99503
Phone: 907-865-3300	Email: stephanie.rupert@eni.com	Phone: 907-222-1112	Email: clindsey@slrconsulting.com
10. STATEMENT OF CERTIFICATION			
Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.			
Name of Responsible Official (typed): Stephanie Rupert		Title: SEQ Manager Alaska	
X Signature (blue ink): <i>Stephanie F. Rupert</i>		Date: <i>7/22/24</i>	

FORM A4
Title V Air Operating Permit Renewal Application Information

Permit Number: AQ0923TVP02

1.	Permit Contact: Name	Stephanie Rupert
	Title	SEQ Manager Alaska
	Mailing Address Line 1	3700 Centerpoint Drive, Suite 500
	Mailing Address Line 2	Anchorage, Alaska 99503
	Phone Number	907-865-3300
	Email	Stephanie.rupert@eni.com
2.	Were there any changes to stationary source General Information (Form A1)? If yes, complete and submit a Form A1.	Yes
3.	Were there any changes to the stationary source description (Form A2)? If yes, complete and submit a Form A2.	No
4.	Were there any off-permit changes? Reference any notifications provided to the Department, and attach copies of the notifications.	No
	If yes, integrate changes into renewal permit? [if no, explain]	N/A
5.	Have any Alaska Title I permits been issued to the stationary source since the most recent Title V permit or revision issuance?	No
	If yes, integrate changes into renewal permit? [If yes, please list. If no, explain]	N/A
6.	Will there be any changes to the operating scenario(s)? [if yes, describe and attach Form A3]	No
7.	Will there be any new, modified, or reconstructed emission units or air pollution control equipment? [if yes, attach appropriate forms from Form Series B, C, D, and E]	No
8.	Are the current emissions units correctly identified and defined in the permit? [if no, attach appropriate forms from Form Series B, C, D, and E]	No, See Form B.
9.	Does the CAM rule [40 CFR Part 64] apply to any of the emissions units? [if yes, review the guidance provided for CAM in the Form A4 instructions for this item]	No
10.	Does the accidental release prevention regulation [40 CFR Part 68] apply to the facility? [if yes, provide the appropriate regulatory applicability document in detail.]	No
11.	Are there any other new applicable requirements? [if yes, list the new applicable requirements, emissions units, and attach the appropriate Series E Form]	No

FORM A4**Title V Air Operating Permit Renewal Application Information**

12.	Are there any requested changes in the assessable potential to emit other than those identified in item 9 above? [if yes, answer the following]	No
	Are the changes a result of having better emissions information such as a new emission factor from a recent source test? [if yes, complete and attach any applicable emissions forms from Series D. Attach additional information as necessary to fully document.]	N/A
	Are the changes due to an increase in production? [if yes, complete and attach the applicable emissions form from Series D. Attach additional information as necessary to fully document.]	N/A
13.	Is the stationary source in compliance with all of the conditions of the current permit? If yes, attach a compliance certification. If no, attach a compliance schedule and/or actions taken for any out-of-compliance emission units.	Yes, please see the attached compliance certification.
14.	Are there any requested changes to testing and/or monitoring conditions? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	No
15.	Are there any requested changes to monitoring conditions other than those being replaced by CAM? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	No
16.	Are there any requested changes to recordkeeping conditions? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	Yes, see the attached B and E forms.
17.	Are there any requested changes to reporting conditions? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	Yes, see the attached B and E forms.
18.	Are there any requested changes to the non-applicable requirements (i.e. permit shield)? [if yes, identify the emission unit, the requested change, and the reason in the appropriate Series B and/or D form. If the change applies stationary source-wide, complete the appropriate Series E form. Attach additional information as necessary to fully document.]	No

FORM A4
Title V Air Operating Permit Renewal Application Information

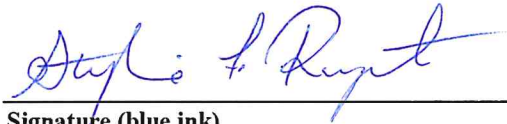
19.	Are there any other requested changes to any condition? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	Yes, see the attached applicable E forms.

Statement of Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Stephanie Rupert

Name of Responsible Official



Signature (blue ink)

SEQ Manager Alaska

Title

7/22/24

Date

Annual Compliance Certification
Eni Nikaitchuq Development -- Operating Permit No. AQ0923TVP02
1/1/2023 through 12/31/2023

Permit Condition		Compliance Status	Method Used to Determine Status	Comments
No.	Summary/Description		40 C.F.R. 71.6 (c) (5) (iii) (B)	
Section 3. State Requirements				
Visible Emissions Standards				
1	Incinerators and Fuel-Burning Equipment Visible Emissions. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from all emissions units, except for the nonroad engines (NREs) and the gasoline dispensing facility (EU ID 118), listed in Table A to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
1.1-1.5	1.1 For the fuel gas- and propane-fired engines, turbines, boilers, and heaters, EU IDs 1, 2, 33, 94, 95, 106, 111, and 112 listed in Table A burn only propane or fuel gas as fuel. Monitoring for these emissions units shall consist of a statement in each operating report under Condition 95 indicating whether each of these emissions units fired only gas during the period covered by the report. Report under Condition 94 if any fuel other than fuel gas or propane is burned. 1.2 For each of EU IDs 69 through 71, 109, 110, 114, and 115 (emissions units with potential emissions that are insignificant based on unrestricted operations but are significant per 18 AAC 50.326(d)(1)) listed in Table A, monitoring shall consist of an annual compliance certification under Condition 96 for the visible emissions standard based on reasonable inquiry. 1.3 For EU IDs 23 and 24 (workover rig heaters) and EU ID 50 (fire water pump) listed in Table A (emissions units that are significant per 18 AAC 50.326(d)(1) but are otherwise insignificant based on historical actual emissions per 18 AAC 50.326(e)), as long as the emissions units do not exceed the corresponding operational limits in Table C and Condition 26.2, monitoring shall consist of an annual compliance certification under Condition 96 for the visible emissions standard based on reasonable inquiry. Otherwise, monitor, record, and report in accordance with Conditions 2 through 4 for the remainder of the permit term. 1.4 For the liquid fuel-fired engines, turbines, boilers, and heaters, EU IDs 3, 47, 49, 64, 68, 93, 107, 108, and 116, EU IDs 9 through 13 (On-Shore Development Drilling Rig equipment), and EU IDs 98 through 101 (Off-Shore Development Drilling Rig equipment) listed Table A, monitor, record and report in accordance with Conditions 2 through 4. 1.5 For the dual fuel-fired turbine, EU ID 32, burn gas as the primary fuel. Monitoring for this emissions unit shall consist of a statement in each operating report required under Condition 95 indicating whether the emissions unit burned gas as the primary fuel during the period covered by the report. If the emissions unit operated on a back-up liquid fuel during the period covered by the report, the Permittee shall monitor, record, and report in accordance with Conditions 14.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
1.6-1.7	1.6 For the flares, EU IDs 4 and 123, monitor, record and report in accordance with Condition 5. 1.7 For the incinerator, EU ID 96, monitor, record and report in accordance with Condition 6.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
2-2.4	Visible Emissions Monitoring. When required by Conditions 1.3 or 1.4, the Permittee shall observe the exhaust of EU IDs 3, 9 through 13, 23, 24, 47, 49, 50, 64, 68, 93, 98 through 101, 107, 108, and 116 for visible emissions using the Method 9 Plan under Condition 2.4 or the Smoke/No-Smoke Plan under Condition 2.5. 2.1 In the event of replacement of any of EU IDs 3, 9 through 13, 23, 24, 47, 49, 50, 64, 68, 93, 98 through 101, 107, 108, and 116, the Permittee shall observe the exhaust of the newly installed emissions unit(s) using either the Method 9 2.2 Plan under Condition 2.4 or the Smoke/No-Smoke Plan under Condition 2.5. The Permittee may change visible emissions plan for an emissions unit at any time unless prohibited from doing so by Condition 2.6. 2.3 The Permittee may for each unit, elect to continue the visible emissions monitoring schedule in effect from the previous permit at the time a renewed permit is issued, if applicable. 2.4 Method 9 Plan. For all observations in this plan, observe emissions unit exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.2	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
2.5-2.6	2.5 Smoke/No Smoke Plan. Observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor 2.6 Corrective Actions Based on Smoke/No Smoke Observations. If visible emissions are present in the emissions unit exhaust during an observation performed under the Smoke/No Smoke Plan of Condition 2.5, then the Permittee shall either follow the Method 9 plan of Condition 2.4 or water vapor.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	

Annual Compliance Certification
Eni Nikaitchuq Development -- Operating Permit No. AQ0923TVP02
1/1/2023 through 12/31/2023

Permit Condition		Compliance Status	Method Used to Determine Status	Comments
No.	Summary/Description		40 C.F.R. 71.6 (c) (5) (iii) (B)	
3-3.1	Visible Emissions Recordkeeping. The Permittee shall keep records as follows: 3.1 When using the Method 9 Plan of Condition 2.4, a.the observer shall record (i)the name of the stationary source, emissions unit and location, emissions unit type, observer's name and affiliation, and the date on the Visible Emissions Observation Form in Section 12; (ii)the time, estimated distance to the emissions location, sun location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating mode (load or fuel consumption rate or best estimate if unknown) on the sheet at the time opacity observations are initiated and completed; (iii)the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made; (iv)opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation Form in Section 12; and (v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period. b.To determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet. c.Calculate and record the highest six-consecutive- and 18-consecutive-minute average opacities observed.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
3.2-3.3	If using the Smoke/No Smoke Plan of Condition 2.5, record the following information in a written log for each a.the date and time of the observation; b.the EU ID of the emissions unit observed; c.whether visible emissions are present or absent in the emissions unit exhaust; d.a description of the background to the exhaust during the observation; e.if the emissions unit starts operation on the day of the observation, the startup time of the emissions unit; f.name and title of the person making the observation; and g.operating mode (load or fuel consumption rate or best estimate, if unknown). 3.3 The record may be kept in electronic format.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
4-4.2	Visible Emissions Reporting. The Permittee shall report visible emissions as follows: 4.1 Include in each operating report under Condition 95, for the period covered by the report: a.which visible-emissions plan of Condition 2 was used for each emissions unit; if more than one plan was used, give the time periods covered by each plan; b.for all Method 9 Plan observations, (i)copies of the observation results (i.e. opacity observations) for each emissions unit that used the Method 9 Plan, except for the observations the Permittee has already supplied to the Department; and (ii)a summary to include: (A)number of days observations were made; (B)highest six-consecutive and 18-consecutive-minute average opacities observed; and (C)dates when one or more observed six-consecutive-minute average opacities were greater than 20 percent; c.for each emissions unit under the Smoke/No Smoke Plan, the number of days that smoke/no smoke observations were made and which days, if any, that visible emissions were observed; and d.a summary of any monitoring or recordkeeping required under Conditions 2 and 3 that was not done. 4.2 Report under Condition 94: a.the results of Method 9 observations that exceed an average of 20 percent opacity for any six-consecutive-minute period; and b.if any monitoring under Condition 2 or 6 was not performed when required, report within three days of the date the monitoring was required.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	

Annual Compliance Certification
Eni Nikaitchuq Development -- Operating Permit No. AQ0923TVP02
1/1/2023 through 12/31/2023

No.	Permit Condition	Compliance Status	Method Used to Determine Status	Comments
	Summary/Description		40 C.F.R. 71.6 (c) (5) (iii) (B)	
5-5.4	5.Visible Emissions MR&R. For EU IDs 4 and 123, the Permittee shall observe one daylight flare event3 within 12 months of the preceding flare event observation. If no daylight flare event occurs within that 12-month period, then the Permittee shall observe the next daylight flare event. 5.1. Monitor flare events using Method 9, for at least 18 consecutive minutes. 5.2. Record the following information for observed events: a.the flare(s) EU ID number; b.results of the Method 9 observations; c.reason(s) for flaring; d.date, beginning and ending time of event; and e.volume of gas flared. 5.3 Monitoring of a flare event may be postponed for safety or weather reasons, or because a qualified observer is not available. If monitoring of a flare event is postponed for any of the reasons described in this condition, the Permittee shall include in the next operating report required by Condition 95, an explanation of the reason the event was not monitored. 5.4 The records required by Condition 5.2 may be kept in electronic format.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
5.5-5.6	5.5 Attach copies of the records required by Condition 5.2 with the operating report required by Condition 95 for the period covered by that report. 5.6 Report under Condition 94 whenever the opacity standard in Condition 1 is exceeded.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
6-6.5	Incinerator Visible Emissions MR&R. The Permittee shall observe emissions from EU ID 96 for 18 consecutive minutes to obtain a minimum of 72 observations in accordance with Method 9 of 40 C.F.R. 60, Appendix A, as follows: 6.1 The Permittee may elect to continue the visible emissions monitoring schedule in effect from a previous permit; or 6.2 Conduct Method 9 observations at least once every three calendar months after the effective date of this permit during which the incinerator operates; and 6.3 After two years, subsequent observations may be reduced to an annual observation if the three-month observations in Condition 6.1 do not exceed the visible emissions standard in Condition 1. 6.4 If the most recent set of observations shows a six-consecutive-minute average opacity to be greater than 15 percent and one or more observations are greater than 20 percent, the Permittee shall comply with the following: a.Make repairs and increase the Method 9 observation frequency to at least once per calendar month during which the incinerator operates; and b.After three consecutive calendar months of Method 9 observations under Condition 6.4.a without exceeding the criteria in Condition 6.4, the Permittee shall continue with the annual observation frequency described in Condition 6.3. 6.5 Record and report as described in Conditions 3 through 4, as applicable to Method 9 observations.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
Particulate Matter Emissions Standards				
7	Fuel-Burning Equipment PM. The Permittee shall not cause or allow particulate matter (PM) emitted from all emissions units, except for the nonroad engines (NREs), the gasoline dispensing facility (EU ID 118), and the incinerator (EU ID 96), listed in Table A to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
7.1-7.3	7.1 For the fuel-gas- and propane-fired engines, turbines, boilers, and heaters, EU IDs 1, 2, 33, 94, 95, 106, 111, and 112 listed in Table A, burn only propane or fuel gas as fuel. Monitoring for these emissions units shall consist of a statement in each operating report under Condition 95 indicating whether each of these emissions units fired only gas during the period covered by the report. Report under Condition 94 if any fuel other than gas or propane is burned. 7.2 For each of EU IDs 69 through 71, 109, 110, 114, and 115 (emissions units with potential emissions that are insignificant based on unrestricted operations but are significant per 18 AAC 50.326(d)(1)) listed in Table A, monitoring shall consist of an annual compliance certification under Condition 96 for the PM standard based on reasonable inquiry. 7.3 For EU IDs 23 and 24 (workover rig heaters) and EU ID 50 (fire water pump) listed in Table A (emissions units that are significant per 18 AAC 50.326(d)(1) but are otherwise insignificant based on historical actual emissions per 18 AAC 50.326(e)), as long as the emissions units do not exceed the corresponding operational limits in Table C and Condition 26.2, monitoring shall consist of an annual compliance certification under Condition 96 for the PM emissions standard based on reasonable inquiry. Otherwise, monitor, record, and report in accordance with Conditions 8 through 10 (for EU ID 50) and Conditions 11 through 13 (for EU IDs 23 and 24) for the remainder of the permit term.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	

Annual Compliance Certification
Eni Nikaitchuq Development -- Operating Permit No. AQ0923TVP02
1/1/2023 through 12/31/2023

Permit Condition		Compliance Status	Method Used to Determine Status	Comments
No.	Summary/Description		40 C.F.R. 71.6 (c) (5) (iii) (B)	
7.4-7.7	7.4 For the liquid fuel-fired engines and turbines, EU IDs 3, 47, 49, 64, 68, 93, and 116 listed in Table A, monitor, record and report in accordance with Conditions 8 through 10. 7.5 For the liquid fuel-fired boilers, and heaters, EU IDs 107 and 108, EU IDs 9 through 13 (On-Shore Development Drilling Rig), and EU IDs 98 through 101 (Off-Shore Development Drilling Rig) listed in Table A, monitor, record and report in accordance with Conditions 11 through 13. 7.6 For the dual fuel-fired turbine, EU ID 32, the Permittee shall comply with Condition 1.5. 7.7 For the flares, EU IDs 4 and 123, monitor, record and report in accordance with Condition 5.	Continuous	HSE Records Review	
8	PM Monitoring. The Permittee shall conduct source tests on diesel engines EU IDs 3, 47, 49, 50 (if triggered per Condition 7.3), 64, 68, 93 and 116, and the dual fuel-fired turbine EU ID 32 (if required per Condition 14.3.a), to determine the concentration of PM in the exhaust of an emissions unit.	Continuous	HSE Records Review	
8.1-8.2	8.1 If any of EU IDs 3, 47, 49, 50 (if triggered per Condition 7.3), 64, 68, 93 and 116, and the dual fuel-fired turbine EU ID 32 (if required per Condition 14.3.a) exceeds the criteria of Condition 8.2.a or 8.2.b, the Permittee shall, within six months of the exceedance, either a. except as exempted under Condition 8.4, conduct a PM source test according to requirements set out in Section 7; or b. make repairs and observe visible emissions as described in Condition 2.4 to show that emissions no longer exceed the criteria of Condition 8.2 under load conditions comparable to those when the criteria were exceeded. 8.2 Conduct the PM source test or make repairs according to Condition 8.1 if a. 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent; or b. for an emissions unit with an exhaust stack diameter that is less than 18 inches, 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity that is greater than 15 percent and not more than 20 percent, unless the Department has waived this requirement in writing. 8.3 During each one-hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the highest 18-minute average opacity measured during each one-hour test run. Submit a copy of these observations with the source test report. 8.4 The PM source test requirements in Conditions 8.1 and 8.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.	Continuous	HSE Records Review	
9	PM Recordkeeping. The Permittee shall keep records of the results of any source test and visible emissions observations conducted under Condition 8.	Continuous	HSE Records Review	
10-10.3	PM Reporting. The Permittee shall report as follows: 10.1. Report under Condition 94 a. the results of any PM source test that exceeds the PM emissions limit in Condition 7; or b. if one of the criteria of Condition 8.2 was exceeded and the Permittee did not comply on time with either Condition 8.1.a or Condition 8.1.b. Report the deviation within 24 hours of the date compliance with Condition 8.1 was required; 10.2. Notify the Department of any Method 9 observation results that are greater than the threshold of either Condition 8.2.a or Condition 8.2.b within 30 days of the end of the month in which the observations occurred. Include the dates, EU ID(s), and results when an observed 18-minute average opacity was greater than an applicable threshold in Condition 8.2; 10.3. In each operating report under Condition 95, include for the period covered by the report 2/18/2021 a. a summary of the results of any PM source test and visible emissions observation conducted under Condition 8; and b. copies of any visible emissions observation results greater than the thresholds of Condition 8.2, if they were not already submitted.	Continuous	HSE Records Review	

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11-11.3	PM Monitoring. The Permittee shall conduct source tests on EU IDs 9 through 13, EU IDs 23 and 24 (if triggered per Condition 7.3), EU IDs 98 through 101, 107, and 108 to determine the concentration of PM in the exhaust of each of the emissions units as follows: 11.1. Except as exempted under Condition 11.3, conduct a PM source test according to the requirements in Section 7 no later than 90 calendar days after anytime corrective maintenance fails to eliminate visible emissions greater than the 20 percent average opacity threshold for two or more 18-consecutive-minute observations in a consecutive six-month period. 11.2. During each one-hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the highest 18-consecutive-minute average opacity that was measured during each one-hour test run. Submit a copy of these observations with the source test report. 11.3. The PM source test requirement in Condition 11 is waived for an emissions unit if: a.a source test on that unit has shown compliance with the PM standard during the permit term; or b.corrective action was taken to reduce visible emissions and two consecutive 18-minute Method 9 visible emissions observations (as described in Condition 2.4) conducted thereafter within a six-month period show visible emissions less than the threshold in Condition 11.1.	Continuous	HSE Records Review	
12	PM Recordkeeping. The Permittee shall keep records of the results of any PM testing and visible emissions observations conducted under Condition 11.	Continuous	HSE Records Review	
13-13.2	PM Reporting. The Permittee shall report as follows: 13.1. In each operating report required by Condition 95, include for the period covered by the report: a.the dates, EU ID(s), and results when an observed 18-minute opacity observation was greater than the threshold in Condition 11.1. b.a summary of the results of any PM testing and visible emissions observations conducted under Condition 11. 13.2. Report as excess emissions, in accordance with Condition 94, any time the results of a source test for PM exceeds the PM emission limit stated in Condition 7.	Continuous	HSE Records Review	
14-14.5	14. The Permittee shall monitor, record and report the monthly hours of operation of EU ID 32 when operating on a back-up liquid fuel, as set out in Conditions 26.1.a through 26.1.d. 14.1. If EU ID 32 does not exceed 600 hours of operations in any 12 consecutive months on a back-up liquid fuel, monitoring of compliance for visible emissions and PM shall consist of an annual compliance certification under Condition 96 based on reasonable inquiry. 14.2. For EU ID 32, notify the Department and begin monitoring in accordance with Condition 14.3 no later than 15 days after the end of a calendar month in which the cumulative hours of operation for a 12-consecutive-month period exceed 600 hours on a back-up liquid fuel, or during the next scheduled operation on back-up liquid fuel. 14.3. When required to do so by Condition 14.2, observe the emissions unit exhaust, following 40 C.F.R. 60, Appendix A-4 Method 9, for 18 minutes to obtain 72 consecutive 15-second opacity observations. a.If the observation exceeds the standard in Condition 1, monitor as described in Condition 8. b.If the observation does not exceed the standard in Condition 1, no additional monitoring is required until the cumulative hours of operation exceed each subsequent 600-hour operation on back-up liquid fuel during a 12-consecutive-month period.4 14.4. Keep records and report in accordance with Conditions 3, 4, 9, and 10. 14.5. Report under Condition 94 if the Permittee fails to comply with any of Conditions 14.2, 14.3, and 14.4.	Continuous	HSE Records Review	
Sulfur Compound Emission Standards and MR&R Requirements				
15-15.1	Sulfur Compound Emissions. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from EU IDs 1 through 3, 4, 9 through 13, 23, 24, 32, 33, 47, 49, 50, 64, 68 through 71, 93 through 95, 98 through 101, 106 through 116, and 123, listed in Table A to exceed 500 ppm averaged over three hours. 15.1 The Permittee shall comply with Condition 15 by complying with Condition 27.	Continuous	HSE Records Review	

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Insignificant Emission Units				
16-16.3	16 For emission units at the stationary source that are insignificant as defined in 18 AAC 50.326(d)-(i) that are not listed in this permit, the following apply: 16.1 VE Standard: The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment, or an incinerator to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes. 16.2 PM Standard: The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and average over three hours. 16.3 Sulfur Standard: The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.	Continuous	HSE Records Review	
16.4	16.4 General MR&R for Insignificant Emission Units a. The Permittee shall submit the certification of compliance of Condition 96 based on reasonable inquiry; b. The Permittee shall comply with the requirements of Condition 78; c. The Permittee shall report in the operating report required by Condition 95 if an emission unit is insignificant because of actual emissions less than the thresholds of 18 AAC 50.326(e) and actual emissions become greater than any of those thresholds; and d. No other monitoring, recordkeeping or reporting is required for insignificant emissions units to demonstrate compliance with the emissions standards under Conditions 16.1, 16.2, and 16.3.	Continuous	HSE Records Review	
Pre-Construction Permit Requirements				
17	Operation of Construction Well Test Flare, EU ID 123: The Permittee shall notify the Department in accordance with Condition 92 upon startup of EU ID 123 and when it has been removed from the source.	Continuous	HSE Records Review	
18-18.2	Operation of Drilling Rigs. The Permittee is authorized to operate the following two drilling rigs in accordance with the terms and conditions of this permit: 18.1. On-Shore Drilling Rig consisting of EU IDs 9 through 18, 74, and 75 listed in Table A are collectively referred to as the “Nabors 245E Drilling Rig.” The Permittee shall comply with the following: a. Operate actual drilling rig similar to or smaller than the Nabors 245E Drilling Rig; and b. In all situations, operate boilers and heaters with cumulative rating not exceeding 19.3 MMBtu/hr and engines with cumulative rating not exceeding 5,400 bHp. 18.2. Off-Shore Development Drilling Rig consisting of EU IDs 98 through 105, 117, 124, and 125 listed in Table A are collectively referred to as the “Doyon Drilling Rig (DDR).” The Permittee shall comply with the following: a. Operate actual drilling rig similar to or smaller than the DDR; and b. In all situations, operate boilers and heaters with cumulative rating not exceeding 16.9 MMBtu/hr and engines with cumulative rating not exceeding 14,500 bHp.	Continuous	HSE Records Review	
19-19.2	Operation of Intermittent Well Servicing Equipment. The Permittee is authorized to periodically operate intermittent well servicing equipment listed in Table A, collectively called “Workover Rig,” in accordance with the terms and conditions of this permit. The Permittee shall comply with the following: 19.1. Operate actual Workover Rigs similar or smaller than the Workover Rig presented as EU IDs 19 through 24 in Table A; 19.2. In all situations, operate boilers and heaters with cumulative rating not exceeding 15.5 MMBtu/hr and engines with cumulative rating not exceeding 1,225 bHp;	Continuous	HSE Records Review	

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20-20.4	Notification and Reporting Requirements. The Permittee shall submit the following notification and reports to the Department as follows: 20.1. Submission of Drilling Rig Information. Upon revisions to the emissions unit inventory of the selected drilling rig, notify the Department of the following information, as set forth in Condition 92: a. the name of the selected drilling rigs (e.g., Nabors 245E, DDR); b. an emissions unit inventory listing each combustion unit in the drilling rig, along with the make/model and rating of each combustion unit; c. the cumulative capacity of the Drilling Rig engines; d. the cumulative capacity of the drilling rig boilers / heaters; and e. a statement as to whether the selected drilling rig complies with the requirements under Conditions 18.1 and 18.2. 20.2. Notification of Change of NRE Status. Submit a written Notice to the Department, as set forth in Condition 92, in the event a rig engine or work-over engine EU loses its nonroad engine status and becomes a stationary engine. a. Label each NRE listed in Table A that becomes a stationary EU within 30 days of EU status change. Place the EU ID in a conspicuous location on or adjacent to the unit. 20.3. Emissions and Fuel Control Settings and Stacks. The Permittee shall provide the revised settings and the reason for the revision in the operating report submitted under Condition 95 for that reporting period, if the Permittee makes changes to: a. the emission and fuel control settings and stacks of the turbines, EU IDs 1, 2, 32, and 33; and b. the emission and fuel control settings on any of the engines, EU IDs 3, 47, 49, 50, 64, 68, 93, and 116. 20.4. If the cumulative EU rating limits under Conditions 18.1.b, 18.2.b, and 19.2 are exceeded, or if any of Conditions 17 through 20 are not met, submit an excess emissions and permit deviation report under Condition 94.	Continuous	HSE Records Review	
ORLs to Avoid PDS Review under 18 AAC 50.306				
21	Carbon Monoxide (CO) and Nitrogen Oxide (NOx) Limits: CO and NOx emissions from stationary EUs 1, 2, 3, 4, 9 through 13, 23, 24, 32, 33, 47, 49, 50, 64, 68, 69, 70, 71, 93 through 96, 98 through 101, 106 through 112, and 114 through 116 listed in Table A; EUs 9 through 13 listed in Table B; EUs 98 through 101 listed in Table C; and EUs 23 and 24 listed in Table D shall not exceed 225 tons per 12-month rolling period for each pollutants CO and NOx.	Continuous	HSE Records Review	
21.1.a(i) - (iii)	21.1 Monitor, record, and report as follows: a. Group A (Fuel Gas-fired Solar Taurus 70 Gas Turbines - EUs 1, 2, 32 (when firing fuel gas), and 33. For Group A EUs, the Permittee shall comply with the following: (i) Capture the 60-second average load in percent of full load and the 60-second average inlet air temperature in degrees Fahrenheit (°F) for each EU during all periods of operation. Record for each calendar day, the minimum 60-second average load and the minimum 60-second average inlet air temperature. (ii) Except as noted below, round the 60-second average load up to the next higher load and round the 60-second air inlet temperature down to the next lower inlet air temperature presented in Table I and Table J of Appendix A. Consider all 60-second average loads between 40 percent (inclusive) and 45 percent (exclusive), as 40 percent loads. (iii) Using the method described in Condition 21.1a(iv), determine the pounds (lb) of CO and NOx emitted during the 60-second period for the given 60-second average load and 60-second average inlet air temperature, as rounded under Condition 21.1a(ii). For each hour, calculate and record the hourly CO and NOx emissions in lb.	Continuous	HSE Records Review	
21.1.a(iv)	(iv) When calculating the CO and NOx emissions under Condition 21.1a(iii), the Permittee must use either the pounds per minute (lb/min) CO and NOx emission values listed in Table I and Table J of Appendix A or Department-approved substitute lb/min values. Use one of the following approaches if a parameter measured under Condition 21.1a is missing or suspect. Note which approach is used (if applicable) in the operating report submitted under Condition 95. (A) If the 60-second average load is unknown or suspect, use the largest lb/min CO and NOx emissions value in Table I and Table J of Appendix A (or the substitute worst-case lb/min value) for the given inlet air temperature; or (B) If the 60-second average inlet temperature is unknown or suspect: (1) use the largest lb/min CO and NOx emissions value in Table I and Table J of Appendix A (or the worst-case lb/min value) for the given load; or (2) obtain the ambient temperature measured by the National Weather Service (NWS) at the Deadhorse Airport for each hour of missing inlet air temperature and use the NWS temperature in lieu of the inlet air temperature when calculating the pounds of CO and NOx under Condition 25.1a(iii). (C) If the 60-second average load and the 60-second average inlet air temperature are both unknown or suspect, use 17.03 lb/min for CO emissions calculations and 0.78 lb/min for NOx emissions calculations or Department-approved substitute maximum lb/min values.	Continuous	HSE Records Review	
21.1.a(v)	(v) By the end of each calendar month, calculate and record the monthly CO and NOx emissions (in lb) for each EU, the cumulative monthly CO and NOx emissions (in lb), and the 12-month rolling CO and NOx emissions in tons for the previous month.	Continuous	HSE Records Review	

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21.1.b	b. Group B (Diesel Internal Combustion Engines - EUs 3, 47, 49, 50, 64, 68, 93, 116). For Group B, (i) Maintain a dedicated engine hour meter on each EU listed in Condition 21.1.b. (ii) Calculate and record the monthly CO and NOx emissions in pounds (lb) of each EU as follows: (A) For each calendar month, monitor and record the total monthly hours of operation of the EU. (B) By the end of each month, calculate the monthly CO and NOx emissions (in lb) for the previous month for each EU listed using a Department approved emission factor. If the total monthly hours of operation is unknown or suspect, use the total hours for that month. (iii) By the end of each calendar month, calculate and record the cumulative monthly CO and NOx emissions (in lb) and the 12-month rolling CO and NOx emissions (in tons).	Continuous	HSE Records Review	
21.1.c	c. Group C (Flares - EU 4). For Group C, (i) Monitor and record the volume of flared gas in standard million cubic feet (MMscf) on a monthly basis. (ii) By the end of each month, calculate, and record the monthly CO and NOx emissions (in lb) by using a representative fuel gas analysis and the emission factors: 0.31 lb/MMBtu to calculate the CO emissions and 0.068 lb/MMBtu to calculate the NOx emissions. (iii) By the end of each calendar month, calculate and record the 12-month rolling CO and NOx emissions (in tons).	Continuous	HSE Records Review	
21.1.d	d. Group D (Heaters and Boilers - EUs 9 through 13, 23, 24, 69, 70, 71, 94, 95, 98 through 101, 106 through 112, 114 and 115): For Group D, (i) Determine and record the monthly hours of operation for each EU using one of the following three methods. The Permittee does not need to use the same method for all EUs. Identify the method selected for each EU in the operating report under Condition 95. (A) Daily Operation Method (1) For each calendar day, monitor and record whether the EU was operated. (2) By the end of each calendar month, calculate the monthly hours of operation during the previous month by multiplying the days operated by 24 hours. (B) Hourly Operation Method (1) Monitor and record each start-up and shutdown time. (2) By the end of each calendar month, review the start-up and shutdown times during the previous month and determine the monthly hours of operation. Round portions of an hour up to the next quarter hour fraction. (C) Monthly Operation Method. For each EU with an hour meter, for each calendar month monitor and record the total monthly hours of operation. (ii) By the end of the calendar month, calculate, and record the monthly CO and NOx emissions (in lb) of each (A) diesel-fired EU during the previous month using the emission factors: 0.0417 lb/MMBtu for CO emissions and 0.1667 lb/MMBtu for NOx emissions. (B) propane-fired EU during the previous month using the emission factors: 0.0829 lb/MMBtu for CO emissions and 0.1436 lb/MMBtu for NOx emissions. (C) fuel-gas fired EU during the previous month using the emission factors: 84 lb/MMBtu for CO emissions and 100 lb/MMBtu for NOx emissions. (iii) By the end of each calendar month, calculate, and record the cumulative monthly CO and NOx emissions (in pounds) and the 12-month rolling CO and NOx emissions (in tons).	Continuous	HSE Records Review	
21.1.e	e. Group E (Incinerators - EU 96): For Group E, (i) Determine and record the monthly amount of waste burned (in tons) for EU ID 96. (ii) By the end of each calendar month, calculate, and record the monthly CO and NOx emissions (in lb) using the emission factors: 10 lb/ton for CO and 3 lb/ton for NOx emissions. (iii) By the end of each calendar month, calculate, and record the cumulative monthly CO and NOx emissions (in pounds) and the 12-month rolling CO and NOx emissions (in tons).	Continuous	HSE Records Review	
21.1.f	f. Group F (EU 32 when firing Liquid Fuel): For EU 32 when firing liquid fuel, (i) By the end of each calendar month, calculate, and record the monthly CO and NOx emissions (in lb) using the emission factors: 10 lb/hr for CO emissions and 31.5 lb/hr for NOx emissions. (ii) By the end of each calendar month, calculate, and record the cumulative monthly CO and NOx emissions (in lb) and the 12-month rolling CO and NOx emissions (in tons).	Continuous	HSE Records Review	
21.1.g	g. By the end of each calendar month, calculate and record the total 12-month rolling CO and NOx emissions (in tons) for Groups A through F.	Continuous	HSE Records Review	

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21.2 - 21.4	21.2. The Permittee may conduct selection and recording of data required in Conditions 21.1.a through 21.1.g electronically. 21.3. In each operating report submitted under Condition 95, report for each month of the reporting period: a. the total 12-month rolling CO and NOx emissions calculated under Condition 21.1.g; b. the range of inlet air temperatures recorded for EU IDs 1, 2, 32 (when burning fuel gas and when burning liquid fuel) and 33 during the month; and c. any periods where the monitoring equipment or electronic algorithm required under Condition 21.1, was malfunctioning or inoperable. Specify the malfunctioning or inoperable item with each period. 21.4. Report as specified in Condition 94, if the total 12-month rolling CO and NOx emissions calculated under Condition 21.1.g for any 12-month period exceed 225 tons of CO or NOx.	Continuous	HSE Records Review	
22 - 22.3	Verification of Turbine Emission Factors: Conduct a winter performance test on one of EUs 1, 2, 32, or 33 to verify the CO and NOx emission factors in Table J and Table I of Appendix A. Use the performance test procedures described in Condition 77.4. Winter is defined as the period between December 1st and April 1st. 22.1 Conduct the winter performance test no less than once every five years from the date of the previous test. 22.2 Except as noted in Condition 26.3, conduct the tests at the following turbine load and inlet temperature conditions: a. Inlet temperature greater than 0°F and 80 percent to 90 percent load; b. Inlet temperature greater than 0°F and load less than 50 percent load; c. Inlet temperature less than 0°F and 80 percent to 90 percent load; d. Inlet temperature less than 0°F and load less than 50 percent load; 22.3 If the weather conditions do not allow for an inlet temperature of less than 0°F, substitute the following for Condition 22.2c and 22.2d: Inlet temperature greater than 0°F, and 60 to 70% load.	Continuous	HSE Records Review	
22.4	In the source test report submitted under Condition 89, compare the average CO emission factors in lb CO/min to the lb CO/min values listed Table F and the average NOx emission factors in lb NOx/min to the lb NOx/min values listed in Table E, for each load and inlet temperature condition tested under Condition 22.2. All testing and reporting must be consistent with the following requirements: a. Use Method 19 of 40 CFR 60, or an alternative approach approved by the Department, for converting all parts per million by volume (ppmv) values into lb/min values. Describe all assumptions (including the assumed standard conditions) and provide example calculations. b. For each individual test and test condition average, report the (i) turbine inlet temperature, (ii) the concurrent NWS temperature recorded at Deadhorse Airport, (iii) the produced electrical power and percent load, (iv) the NOx and CO concentration in ppmv, (v) the percent excess oxygen in the exhaust, (vi) the exhaust volume flow rate and exhaust temperature (vii) the gas producer speed (viii) the equivalent NOx and CO mass emission rate (in lb/min), (ix) whether inlet preheating was used, and (x) whether the turbine was operated in or out of SoLoNOx mode. c. Measure and report the heat content from a representative fuel sample. d. Note in the source test report required under Condition 89 whether the turbine was operating under the same emission and fuel control settings provided in Condition 20.3. If not, provide the emission and fuel control settings used during the performance tests.	Continuous	HSE Records Review	

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Ambient Air Quality Standards (AAQS) Protection Requirements				
23-23.5	General Ambient Air Quality Provisions. Comply with the following provisions to protect the NO₂, SO₂, and PM-10 air quality standards: 23.1 Air Quality Boundary: Establish and maintain the ambient boundaries using the procedures described in Condition 24. 23.2 Stack Configuration: For all stationary fuel EUs listed in Table A, maintain each exhaust stack with uncapped vertical outlets, except as follows: a. Flapper valves or similar are allowed as long as they do not hinder the vertical momentum of the exhaust plume. b. The Permittee may use capped stacks for the following units: EU IDs 47, 69 through 71, 94, 95, and 106 through 112, 114, and 115. c. Intermittent well service equipment rated at less than 400 bHp or 2.8 MMBtu/hr (as applicable) are exempt from Condition 23.2. 23.3. Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height. 23.4 On-Site Housing: If providing on-site housing, follow the procedures described in Condition 25. 23.5 Cumulative Capacity: Comply with each cumulative capacity limit in Conditions 18.1.b, 18.2.b, and 19.2. Notify and report in accordance with Conditions 20.1 and 20.4.	Continuous	Field Operating/Maintenance Records Review	
24-24.2	Public Access Control Plan. Establish and maintain the ambient air boundaries as follows: 24.1 Comply with the provisions contained in the "Nikaitchuq Project Public Access Control Plan" (as provided in Appendix B), or a subsequent written version approved by the Department that contains at least the following elements: a. a scaled map that clearly shows the ambient air boundaries, coast line, spill response boat ramp, Kuparuk Seawater Treatment Plant, Oliktok Road, and warning sign locations; b. ambient boundaries that are consistent with the land owner's authorization to preclude public access from the area within the boundaries; c. defined methods of establishing and maintaining the boundary, such as surveillance and posting of strategically located warning signs (provide size, wording, and inspection/repair schedule); d. the date of the Public Access Control Plan; and e. the procedure for approaching unauthorized people who have crossed the ambient air boundary. 24.2 Post and maintain all warning signs described in the Public Access Control Plan as follows: a. post all signs as stated in the Public Access Control Plan; b. use a font, font size, and contrast coloring that makes all lettering easy to read; c. inspect and repair the signs according to the schedule described in the Public Access Control Plan; and d. keep all signs free of nearby visible obstructions (including wind-blown snow) as safety allows.	Continuous	Field Operating/Maintenance Records Review	
25-25.2	Eni Working Times and Hours Policy. Comply with the provisions contained in the November 6, 2009 "Eni Local Policy" (as provided in Appendix C), or a subsequent written version approved by the Department that contains at least the following elements: 25.1 a statement specifying that the worker housing area is for official business/worker use only; and 25.2 a statement specifying that the on-site workers are on 24-hour call.	Continuous	Field Operating/Maintenance Records Review	
26-26.1	Annual Average NO₂ and SO₂ Ambient Air Quality Protection: Protect the Annual Average NO₂ and SO₂ ambient air quality standards as described in Conditions 26.1 through 26.3. 26.1 Limit the operation of EU IDs 3, 32, 49, 50, 78, and 93 as specified in Table C. Monitor, record, and report as follows: a. Maintain a dedicated engine hour meter on each EU listed in Table C. b. For each calendar month, monitor and record the total hours of operation of each EU listed in Table C during the month, except (i) when conducting a source test required for EU ID 32 under Condition 28.2. c. By the end of each month, calculate and record the cumulative hours of operation for each EU listed in Table C during the previous 12 months. d. In each operating report submitted under Condition 95, report for each month of the reporting period the hours recorded under Conditions 26.1.b and 26.1.c. e. Report as specified in Condition 94, if the operational hours of any of EU IDs 3, 32, 49, 50, 78, and 93 exceeds the limit listed in Table C.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	

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26.2	Limit the operation of the Workover Rig (EU IDs 19 through 24 listed in Table A) to 55 days per consecutive 12-month period as follows: a. For each calendar month in which the Workover Rig is on site, monitor and record the total days of operation during the month. Days of operation includes movement between wellheads but does not include transportation to and from the Nikaitchuq onshore and offshore pads. b. By the end of each calendar month, calculate and record the cumulative days of operation during the previous 12 months. During the initial 12 months of operation, use the operating period to date as a substitute for the 12-month period. c. In each operating report submitted under Condition 95, report for each month of the reporting period the days of operation recorded under Condition 26.2.a and 26.2.b. d. Report as specified in Condition 94, if the days of operation recorded under Condition 26.2.b exceed the limit specified in Condition 26.2.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
26.3	Limit the operation of EU ID 123 to 120 days per consecutive 12-month period. Monitor, record, and report as follows: a. For each calendar month in which EU ID 123 is on site, monitor and record the total days of operation during the month. b. By the end of each calendar month, calculate and record the cumulative days of operation during the previous 12 months. During the initial 12 months of operation, use the operating period to date as a substitute for the 12-month period. c. In each operating report submitted under Condition 95, report for each month of the reporting period the days of operation recorded under Condition 26.3.a and 26.3.b. d. Report as specified in Condition 94, if the days of operation recorded under Condition 26.3.b exceed the limit specified in Condition 26.3.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
27-27.1	Annual, 24-hr, and 3-hr Average SO₂ Ambient Air Quality Protection. Protect the Annual, 24-hr, and 3-hr Average SO ₂ ambient air quality standards as follows: 27.1 For EUs 1, 2, 4, 32 (while burning natural gas), 33, and 106 burn only natural gas with hydrogen sulfide (H ₂ S) content not exceeding 250 ppmv (on an instantaneous basis at standard conditions). a. Monitor compliance monthly using ASTM D 4810-88, D4913-89, or Gas Producers Association 2377-86, or an alternative analytical method approved by the Department. b. The records of the monitoring conducted under Condition 27.1.a may be kept in electronic format. c. In each operating report submitted under Condition 95, report for each month of the reporting period the results of the monitoring conducted under Condition 27.1.a. d. Report as specified in Condition 94, if H ₂ S content of the fuel gas exceeds 250 ppmv at any time.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
27.2	27.2 For diesel burning EUs, burn only ultra low sulfur diesel (ULSD) fuel. a. For each shipment of fuel, keep receipts that specify fuel grade and amount. b. Clearly label the fuel tanks for the diesel burning EUs as "ULSD Only". c. Report in the operating report required by Condition 95, the sulfur content of the diesel fuel burned, or a statement that ULSD only is burned, in each of the EUs; and d. Report as a permit deviation under Condition 94 if the sulfur content of the diesel fuel burned in any EU exceeds 15 ppmw.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
31.3	31.3 For propane burning EUs, burn only propane with sulfur content not exceeding 185 ppmw. a. For each shipment of fuel, keep receipts that specify fuel grade and amount. b. Clearly label the fuel tanks for the propane burning EUs as "Propane Only". c. Report in the operating report required by Condition 95, the sulfur content of the fuel burned, or a statement that the sulfur content did not exceed 185 ppmw, in each of the EUs; and d. Report as a permit deviation under Condition 94 if the sulfur content of the fuel burned in any EU exceeds 185 ppmw.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
28-28.4	Source Testing Requirements, EU ID 32. If the 12 month rolling total operating hours for EU ID 32 when operating on ULSD exceeds the limit specified in Table C, the Permittee shall comply with the following: 28.1. Within 60 days after the permit deviation report under Condition 26.1.e is due, submit to the Department a complete plan for conducting a source test to verify NO _x and CO emission factors specified in Condition 21.1.f using the applicable test methods set out in 40 C.F.R. Part 60, Appendix A. The Permittee may propose alternative test methods if it can be shown to be of equivalent accuracy, and will ensure compliance with the applicable standards or limits. The Department must approve the source test plan prior to the test date; 28.2. Conduct a source test within 180 days of Department approval of the plan submitted under Condition 28.1; 28.3. Within 60 days after completion of the source test required under Condition 28.2, submit the results; and 28.4. In the source test report submitted under Condition 28.3 compare the NO _x and CO emissions factors in lb/min to the NO _x and CO emission factors specified in Condition 21.1.f. Propose revised NO _x and CO emission factors in lb/min for Department approval if source test results exceed the NO _x and CO emission factors specified in Condition 21.1.f.	Continuous	HSE Records Review	

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NSPS Subpart Ec Exemption Requirements, EU ID 96				
29-29.4	29. Hospital and Medical/Infectious Waste Incineration (HMIWI) as a Co-fired Combustor. To demonstrate exemption from the NSPS Subpart Ec requirements as a co-fired combustor, the Permittee shall limit the amount of hospital, medical, and infectious (HMI) wastes combusted in the incinerator, EU ID 96, to no more than 10 percent by weight of the wastes and fuels combusted on a calendar quarter basis. Monitor, record, and report as follows: 29.1. Keep records on a calendar quarter basis of the following: a.weight of HMI waste combusted; b.the weight of all other fuels and wastes combusted; and c.the total weight of all fuels and wastes combusted; i.e., the sum of the weights recorded in Conditions 29.1.a and 29.1.b. 29.2. At the end of each calendar quarter, calculate and record the percent by weight of HMI waste in the total weight of all fuels and wastes combusted, as follows: % HMI waste = (WHMI/Wtotal) X 100 Where: % HMI waste = percent weight of HMI combusted in each calendar quarter WHMI = total weight of HMI burned in each calendar quarter Wtotal = total weight of all fuels and wastes burned in each calendar quarter 29.3. Report under Condition 95 the percent weight of HMI waste, as calculated in Condition 29.2, for each calendar quarter in the reporting period. 29.4. Report as a permit deviation under Condition 94, if the percent weight of HMI waste, as calculated in Condition 29.2, for each calendar quarter exceeds the limit in Condition 29.	Continuous	HSE Records Review	
Section 5. Federal Requirements				
40 CFR 60 New Source Performance Standards (NSPS)				
30 - 30.4	NSPS Subpart A Notification. Unless exempted by a specific subpart, for any affected facility¹² or existing facility¹³ regulated under NSPS requirements in 40 C.F.R. 60, the Permittee shall furnish the Administrator¹⁴ written notification or, if acceptable to both the EPA and the Permittee, electronic notification, as follows: 30.1. a notification of the date construction (or reconstruction as defined under 40 C.F.R. 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form; 30.2. a notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date; 30.3. a notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 C.F.R. 60.14(c). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include: 15 a. information describing the precise nature of the change, b. present and proposed emission control systems, c. productive capacity of the facility before and after the change, and d. the expected completion date of the change. 30.4. a notification of any proposed replacement of an existing facility, for which the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, postmarked as soon as practicable, but no less than 60 days before commencement of replacement, and including the following information: a. the name and address of owner or operator, b. the location of the existing facility, c. a brief description of the existing facility and the components that are to be replaced, d. a description of the existing and proposed air pollution control equipment, e. an estimate of the fixed capital cost of the replacements, and of constructing a comparable entirely new facility, f. the estimated life of the existing facility after the replacements, and g. a discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.	Continuous	HSE Records Review	
31	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements. The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EU IDs 1, 2, 32, and 33, any malfunctions of associated air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EU IDs 1, 2, 32, or 33 is inoperative.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	

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32 - 32.4	NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report. The under this part, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator and the Department of the intended construction or reconstruction. The notification must be submitted in accordance with the procedures in 40 C.F.R. 63.9(b). 32.1. The magnitude of excess emissions computed in accordance with 40 C.F.R. 60.13(h), any conversion factors used, the date and time of commencement and completion of each time period of excess emissions, and the process operating time during the reporting period. 32.2. Identification of each period of excess emissions that occurred during startup, shutdown, and malfunction of EU IDs 1, 2, 32, and 33, the nature and cause of any malfunction, and the corrective action taken or preventative measures adopted. 32.3. The date and time identifying each period during which a Continuous Monitoring System (CMS) was inoperative except for zero and span checks and the nature of any repairs or adjustments. 32.4. A statement indicating whether or not any excess emissions occurred or the CMS was inoperative, repaired, or adjusted, at any time during the reporting period.	Continuous	HSE Records Review	
33 - 33.2	NSPS Subpart A Summary Report Form. The Permittee shall submit to the Department and to EPA one "summary report form" in the format shown in Figure 1 of 40 C.F.R. 60.7 (see Section 15) for each pollutant continuously or periodically required to be monitored (applies to EU IDs 1, 2, 32, and 33 under Subpart KKKK for SO₂) unless an exemption from continuous or periodic monitoring is applied under the NSPS. The report shall be submitted semiannually, postmarked by the 30th day following the end of each 6-month period, except when more frequent reporting is specifically required by an applicable subpart, case-by-case basis, or the EPA, as follows: 33.1 If the total duration of excess emissions for the reporting period is less than one percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than five percent of the total operating time for the reporting period, submit a summary report form unless the EEMSP report described in Condition 32 is requested, or 33.2. If the total duration of excess emissions for the reporting period is one percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is five percent or greater of the total time for the reporting period, then submit a summary report form and the EEMSP described in Condition 32.	Continuous	HSE Records Review	
34	NSPS Subpart A Performance (Source) Tests. The Permittee shall conduct source tests according to 40 C.F.R. 60.8 and Section 7 at such times as may be required by the Administrator, and shall provide the Department and EPA with a written report of the results of the source test.	Continuous	HSE Records Review	
35	NSPS Subpart A Good Air Pollution Control Practice (GAPCP). At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU ID 106, including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EU ID 106.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
36	NSPS Subpart A Credible Evidence. For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 41, 42, 48, and 50, nothing in 40 C.F.R. Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1, 2, 3, 32, 33, 47, 49, 50, 64, 93, and 106, would have been in compliance with applicable requirements of 40 C.F.R. Part 60 if the appropriate performance or compliance test or procedure had been performed.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
37	NSPS Subpart A Concealment of Emissions. The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Conditions 41, 42, 48, and 50. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
Subpart Dc (EU ID 106) - Steam Generating Units				
38-38.1	NSPS Subpart Dc Fuel Consumption. For EU ID 106 listed in Table A, the Permittee shall record the amounts of each fuel combusted during each day and maintain the records in accordance with Condition 90. 38.1. As an alternative to meeting the requirements of Condition 38, for an affected emissions unit that combusts only natural gas or fuel gas, the Permittee may elect to record the amount of each fuel combusted during each calendar month and maintain the records in accordance with Condition 90.	Continuous	HSE Records Review	

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Subpart IIII (EU IDs 3, 47, 49, and 93) - Compression Ignition Internal Combustion Engines (CI ICE)				
39-39.1	NSPS Subpart IIII Applicability and General Compliance Requirements. For EU IDs 3, 47, 49, 50, 64, and 93 listed in Table A, the Permittee shall comply with the applicable requirements of 40 C.F.R. 60, Subpart IIII for stationary compression ignition (CI) internal combustion engine (ICE) whose construction commences 18 months after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006 (for the non-emergency engines, EU IDs 3, 47, 49, 64, and 93) and after July 1, 2006 (for the fire pump engine, EU ID 50). 39.1. For EU IDs 3, 47, 49, 50, 64, and 93, the Permittee shall comply with the applicable provisions of 40 C.F.R. 60 Subpart A as specified in Table 8 to Subpart IIII, and applicable provisions of Subpart IIII as specified in Conditions 40 through 44.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
40-40.1	NSPS Subpart IIII GAPCP. Except as permitted under Condition 40.1, operate and maintain each of EU IDs 3, 47, 49, 50, 64, and 93 and control device according to the manufacturer's written instructions and meet the applicable emissions standards over the entire life of the engine. In addition, the Permittee may only change those settings that are permitted by the manufacturer. 40.1. If the Permittee does not install, configure, operate, and maintain EU IDs 3, 47, 49, 50, 64, and 93 and control devices according to the manufacturer's emission-related written instructions, or changes emission-related settings in a way that is not permitted by the manufacturer, the Permittee shall demonstrate compliance as follows: a.Keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. b.In addition, conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. c.Conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards. d. Conduct performance tests and meet the not-to-exceed standards in accordance with the applicable requirements indicated in 40 C.F.R. 60.4212.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
41-41.2	41. NSPS Subpart IIII Fuel Requirements.19 The Permittee shall comply with the following: 41.1. For EU IDs 3 and 93, use diesel fuel that meets the requirements of 40 C.F.R.80.510(b) for nonroad diesel fuel, as follows: a.Sulfur content of 15 ppm maximum per-gallon (ULSD) standards; and b.Cetane index or aromatic content, as follows: (i)A minimum cetane index of 40; or (ii)A maximum aromatic content of 35 volume percent. 41.2. For EU IDs 47, 49, 50, and 64, the Permittee may use fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel. a. The sulfur content of the used lubricating oil must be less than 200 ppm. b. The used lubricating oil must meet the on-specification levels and properties for used oil in 40 C.F.R. 279.11.	Continuous	HSE Records Review	
42	NSPS Subpart IIII Emission Standards. The Permittee shall comply with the applicable emission standards for EU IDs 3, 47, 49, 50, and 93, as listed below.	Continuous	HSE Records Review	
42.1	Exhaust emission from EU IDs 3, 47 and 49 (pre-2007 model year and 2007-2010 model year with maximum engine power > 2,237 kW (3,000 Hp) stationary non-emergency CI ICE, with a displacement of less than 30 liters per cylinder) shall not exceed the following (Tier 1 standards): a.1.0 g/Hp-hr for HC; b.6.9 g/Hp-hr for NOx; c.8.5 g/Hp-hr for CO; and d.0.40 g/Hp-hr for PM.	Continuous	HSE Records Review	
42.2	Exhaust emission from EU ID 64 (2007 model year and later with maximum engine power ≤ 450 Hp) non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder) shall not exceed the following applicable exhaust emission standards (Tier 3 standards): a.3.0 g/Hp-hr for NMHC + NOx; b.2.6 g/Hp-hr for CO; and c.0.15 g/Hp-hr for PM.	Continuous	HSE Records Review	

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42.3	Exhaust emission from EU ID 93 (2007 model year and later with maximum engine power >560 Hp) non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder) shall not exceed the following applicable exhaust emission standards (Tier 2 standards): a.4.8 g/Hp-hr for NMHC + NOx; b.2.6 g/Hp-hr for CO; and c.0.15 g/Hp-hr for PM.	Continuous	HSE Records Review	
42.4	Exhaust opacity from EU IDs 64 and 93 must not exceed a.20 percent during the acceleration mode; b.15 percent during the lugging mode; and c.50 percent during the peaks in either the acceleration or lugging modes.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
42.5	Exhaust emission from EU ID 50 (stationary fire pump CI ICE) shall not exceed the following applicable exhaust emission standards: a.3.0 g/Hp-hr for NMHC + NOx; b.0.15 g/Hp-hr for PM.	Continuous	HSE Records Review	
43-43.1	NSPS Subpart IIII Monitoring and Recordkeeping. The Permittee shall comply with the following: 43.1. For EU ID 49, demonstrate compliance with the emission standards by keeping records of engine manufacturer data indicating compliance with the applicable emission standards in Condition 42.1.	Continuous	HSE Records Review	
43.2	For EU IDs 3, 47, 50, 64, and 93, demonstrate compliance with the emission standards by purchasing an engine certified to the applicable emission standards in Conditions 42.1 through 42.5. The engines must be installed and configured according to the manufacturer's specifications, except as permitted in Condition 40.1.	Continuous	HSE Records Review	
43.3	For compliance of EU IDs 3 and 93 with the fuel requirements under Condition 41.1, monitor, record, and report in accordance with Condition 27.2.	Continuous	HSE Records Review	
43.4	For EU IDs 47, 49, 50, and 64, if using fuels mixed with used lubricating oil as specified in Condition 41.2, comply with the following: a.Determine that the used oil to be burned for energy recovery meets the fuel specifications of 40 C.F.R. 279.11 and the sulfur content limit in Condition 41.2.a by performing approved analyses or obtaining copies of analyses or other information documenting that the used oil fuel meets the specifications. b.Keep records of the following: (i)copies of analyses of the used oil (or other information used to make the compliance determination in Condition 43.4.a) for three years; (ii)the amount of the used lubricating oil to be blended; (iii)the amount of other distillate fuel oil to be mixed with the used lubricating oil; and (iv)the ratio of the lubricating oil to the total fuel blend.	Continuous	HSE Records Review	

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43.5	The Permittee shall comply with the following requirements for emergency stationary CI ICE, EU ID 50, under Subpart IIII: a. Install a non-resettable hour meter prior to startup of the engine. b. Operate EU ID 50 according to the requirements in Conditions 43.5.b(i) through 43.5.b(iii). In order for the engine to be considered an emergency stationary ICE, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in Conditions 43.5.b(i) through 43.5.b(iii), is prohibited. If the Permittee does not operate the engine according to the requirements in Conditions 43.5.b(i) through 43.5.b(iii), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (i) There is no time limit on the use of emergency stationary ICE in emergency situations. (ii) The Permittee may operate EU ID 50 for the purposes specified in Conditions 43.5.b(ii)(A) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition 43.5.b(iii) counts as part of the 100 hours per calendar year allowed by this Condition 43.5.b(ii). (A) EU ID 50 may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. (iii) EU ID 50 may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in Condition 43.5.b(ii). The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.	Continuous	HSE Records Review	
43.6	Keep records of the operation of EU ID 50 in emergency and non-emergency service that are recorded through the non-resettable hour meter. Record a. the time of operation of the engine; and b. the reason the engine was in operation during that time.	Continuous	HSE Records Review	
44-44.2	NSPS Subpart IIII Reporting. The Permittee shall report as follows: 44.1. Include with the operating report required under Condition 95 a copy of the records required in Conditions 43.3, 43.4.b, and 43.6 for the period covered by the report. 44.2. Report in accordance with Condition 94 if any of the requirements in Conditions 39 through 43 and 45 was not met.	Continuous	HSE Records Review	
45-45.3	NSPS Subpart IIII Deadline for Importing or Installing Stationary CI ICE in Previous Model Years. The Permittee shall comply with the following: 45.1. The Permittee shall not install stationary CI ICE units in previous (2007 – 2017) model years after the dates and as specified in 40 C.F.R. 60.4208(a) – (g). 45.2. In addition to the requirements specified in 40 C.F.R. 60.4201, 60.4202, 60.4204, and 60.4205, the Permittee shall not import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements and after the dates specified in 40 C.F.R. 60.4208(a) – (g). 45.3. The requirements of Condition 45 do not apply to stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.	Continuous	HSE Records Review	
Subpart KKKK (EU IDs 1, 2, 32, and 33) - Turbines Subject to NSPS				
46-46.1	NSPS Subpart KKKK Applicability. For EU IDs 1, 2, 32, and 33 listed in Table A, the Permittee shall comply with the applicable requirements for stationary combustion turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005. 46.1. Only heat input to the combustion turbine shall be included when determining whether or not Subpart KKKK is applicable to a turbine. Any additional heat input to associated heat recovery steam generators (HRSG) or duct burners shall not be included when determining the peak heat input.	Continuous	HSE Records Review	

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	Summary/Description		40 C.F.R. 71.6 (c) (5) (iii) (B)	
47-47.2	NSPS Subpart KKKK GAPCP and General Requirements. The Permittee shall comply with the following: 47.1. Operate and maintain each of EU IDs 1, 2, 32, and 33 and associated air pollution control equipment and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction. 47.2. When any of EU IDs 1, 2, 32, and 33 is equipped with heat recovery system and utilizes a common steam header with one or more combustion turbines, the Permittee shall either: a. Determine compliance with the NOx emissions limit in Condition 48 by measuring the emissions combined with the emissions from the other unit(s) utilizing the common heat recovery unit; or b. Develop, demonstrate, and provide information satisfactory to the Administrator on methods for apportioning the combined gross energy output from the heat recovery unit for each of the affected combustion turbines. The Administrator may approve such demonstrated substitute methods for apportioning the combined gross energy output measured at the steam turbine whenever the demonstration ensures accurate estimation of emissions related under this part.	Continuous	HSE Records Review	
48	NSPS Subpart KKKK NOx Standard. For EU IDs 1, 2, 32, and 33 (turbines located north of the Arctic Circle (latitude 66.5 degrees north)), listed in Table A, the Permittee shall meet the NOx emission limit of 150 ppm at 15 percent O2 or 1,100 ng/J of useful output (8.7 lb/MWh).	Continuous	HSE Records Review	
49-49.1	NSPS Subpart KKKK NOx MR&R. The Permittee shall monitor, record, and report compliance with the NOx emissions standards under Condition 48, as follows: 49.1. Monitoring. Except as provided by the waiver of Condition 49.1.c, the Permittee shall conduct performance tests in accordance with Condition 49.2 to demonstrate continuous compliance with the NOx standard in Condition 48 for each of EU IDs 1, 2, 32, and 33, as follows: a. If the NOx emissions result from the performance test is less than or equal to 75 percent of the NOx emission limit in Condition 48, the Permittee may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). b. If the results of any subsequent performance test exceed 75 percent of the NOx emission limit in Condition 48, the Permittee must resume annual performance tests (no more than 14 months following the previous performance test) until the requirements in Condition 49.1.a are met. c. Performance Test Waiver. In each performance test, the Permittee may elect to test only one of the EU IDs 1, 2, 32 (while operating on natural gas), and 33 if the Permittee satisfies the provisions of Conditions 49.1.c(i) through 49.1.c(iii). (i) The Permittee shall conduct performance tests under this condition of different turbines, so that at the end of four tests (which may include the initial performance test of 40 C.F.R. 60.8), all four turbines will be tested. (ii) In the event any performance test result is greater than 50 percent of the NOx standard in Condition 48, the Permittee will conduct performance tests on the remaining turbines within 60 days of receiving the final test report. Pursuant to 40 C.F.R. 60.4375(b), a written report of the performance test should be submitted to the EPA Administrator. (iii) Once the Permittee has demonstrated that the NOx performance test for all four of these emissions units is less than or equal to 50 percent of the NOx standard in Condition 48, the Permittee may continue to use the waiver provided by this Condition 49.1.c.	Continuous	HSE Records Review	
49.2a	Performance Tests. The Permittee shall conduct NOx performance tests on an a. The Permittee may use either one of the two methodologies described below in Condition 49.2.a(i) or 49.2.a(ii) to conduct performance test. For each test run: (i) Measure the NOx concentration (in ppm), using EPA Method 7E or EPA Method 20 in Appendix A of 40 C.F.R. 60. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in Appendix A of 40 C.F.R. 60, and measure and record the electrical and thermal output from the unit. Then, use the following equation to calculate the NOx emission rate: $E = (1.194 \times 10^{-7}) \times (\text{NOx})_c \times (Q_{\text{std}}) / P$ (ii) Measure the NOx and diluent gas concentrations, using either EPA Methods 7E and 3A, or EPA Method 20 in Appendix A of 40 C.F.R. 60. Concurrently measure the heat input to the unit, using a fuel flow meter(s), and measure the electrical and thermal output of the unit. Use EPA Method 19 in Appendix A of 40 C.F.R. 60 to calculate the NOx emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in 40 C.F.R. 60.4350(f) to calculate the NOx emission rate in lb/MWh.	Continuous	HSE Records Review	

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49.2b	b. Sampling traverse points for NOx and (if applicable) diluent gas are to be selected following EPA Method 20 or EPA Method 1 (non-particulate procedures), and sampled for equal time intervals. The sampling must be performed with a traversing single-hole probe, or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points. c. Notwithstanding Condition 49.2.b, test at fewer points than are specified in EPA Method 1 or EPA Method 20 in Appendix A 40 C.F.R. 60 if the following conditions are met: (i) Perform a stratification test for NOx and diluent pursuant to the procedures specified in Section 6.5.6.1(a) through (e) of Appendix A of 40 C.F.R. 75; (ii) Once the stratification sampling is completed, use the following alternative sample point selection criteria for the performance test: (A) If each of the individual traverse point NOx concentrations is within ± 10 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ± 5 ppm or ± 0.5 percent CO₂ (or O₂) from the mean for all traverse points, then you may use three points (located either 16.7, 50.0 and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The three points must be located along the measurement line that exhibited the highest average NOx concentration during the stratification test; or (B) Sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NOx concentrations is within ± 5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ± 3 ppm or ± 0.3 percent CO₂ (or O₂) from the mean for all traverse points.	Continuous	HSE Records Review	
49.2c	c. Notwithstanding Condition 50.5.b, test at fewer points than are specified in EPA Method 1 or EPA Method 20 in Appendix A 40 CFR 60 if the following conditions are met: (i) Perform a stratification test for NOx and diluents pursuant to the procedures specified in Section 6.5.6.1(a) through (e) of Appendix A of 40 CFR 75; (ii) Once the stratification sampling is completed, use the following alternative sample point selection criteria for the performance test: (A) If each of the individual traverse point NOx concentrations is within ± 10 percent of the mean concentration for all traverse points, or the individual traverse point diluents concentrations differs by no more than ± 5 ppm or ± 0.5 percent CO₂ (or O₂) from the mean for all traverse points, then you may use three points (located either 16.7, 50.0 and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The three points must be located along the measurement line that exhibited the highest average NOx concentration during the stratification test; or (B) Sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NOx concentrations is within ± 5 percent of the mean concentration for all traverse points, or the individual traverse point diluents concentrations differs by no more than ± 3 ppm or ± 0.3 percent CO₂ (or O₂) from the mean for all traverse points;	Continuous	Source Test Report	
49.2d	d. The Permittee shall conduct performance test, as follows: (i) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. (ii) The Permittee may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice; and (iii) The Permittee must conduct three separate test runs for each performance test at a minimum time of 20 minutes per run.	Continuous	Source Test Report	
49.2e	e. For EU ID 32 that combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel.	Continuous	HSE Records Review	
49.2f-g	f. Compliance with the applicable emission limit in Condition 48 must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average NOx emission rate at each tested level meets the applicable emission limit in Condition 48. g. The ambient temperature must be greater than 0 °F during the performance test.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
49.3-49.4	49.3. Recordkeeping. The Permittee shall keep records of all performance tests data in accordance with Condition 90. 49.4. Reporting. For EU IDs 1, 2, 32, and 33, the Permittee shall submit a written report of the results of each performance test required under Conditions 49.1 and 49.2 before the close of business on the 60th day following the completion of the performance test and in accordance with Condition 89.	Continuous	Source Test Report	
50	50. NSPS Subpart KKKK SO ₂ Standard. The Permittee shall not burn in EU IDs 1, 2, 32, and 33 any fuel which contains total potential sulfur emissions in excess of 26 ng SO ₂ /J (0.060 lb SO ₂ /MMBtu) heat input.	Continuous	HSE Records Review	

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51 - 51.1a	NSPS Subpart KKKK SO₂ MR&R. The Permittee shall monitor, record, and report compliance with the SO₂ standard in Condition 50 as follows: 51.1. Monitoring. Except as provided in Condition 51.1.b, the sulfur content of the fuel must be determined using the total sulfur methods described in Condition 51.2. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, the Permittee may use ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377, which measure the major sulfur compounds. a.The Permittee shall determine the sulfur content of the fuel as follows: (i) Fuel oil. For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in Sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of Appendix D to 40 C.F.R. 75 (i.e., flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank). (ii) Gaseous fuel. For owners and operators that elect not to demonstrate sulfur content using options in Condition 51.1.b, and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day. (iii) Custom schedules. Notwithstanding the requirements of Condition 51.1.a(ii), operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply, following the procedures set out in 40 C.F.R. 60.4370(c)(1)(i) through (iii) or 60.4370(c)(2). (A) The two custom sulfur monitoring schedules set forth in 40 C.F.R. 60.4370(c)(1)(i) through (iv) and 60.4370(c)(2) are acceptable without prior Administrative approval. (B) Except as provided in 40 C.F.R. 60.4370(c)(1) and (c)(2), custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in Condition 51.1.a(ii).	Continuous	HSE Records Review	
51.1b	b.The owner or operator may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input. The Permittee shall use one of the following sources of information to make the required demonstration: (i) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content of the fuel is as follows: (A) 0.05 weight percent (500 ppmw) or less for fuel oil; and (B) 20.0 grains/100 scf or less for natural gas; or (ii) Representative fuel sampling data, which show that the sulfur content of the fuel does not exceed 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input. At a minimum, the amount of fuel sampling data specified in 40 C.F.R. 75, Appendix D, Section 2.3.1.4 or 2.3.2.4 is required.	Continuous	Field Operating/Maintenance Records Review Operating Practice	
51.2	Test Methods and Procedures. If the owner or operator is required under Condition 51.1.a(i) or 51.1.a(iii) to periodically determine the sulfur content of the fuel combusted in the turbine, the Permittee shall comply with the following: a. Collect a representative fuel sample following ASTM D5287 for natural gas or ASTM D4177 for fuel oil. Alternatively, for fuel oil, follow the procedures for manual pipeline sampling in Section 14 of ASTM D4057. b. Analyze the samples for the total sulfur content of the fuel using: (i) ASTM D129, or alternatively D1266, D1552, D2622, D4294, or D5453 for liquid fuels; or (ii) ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 for gaseous fuels. c. The fuel analyses required under Condition 51.2 may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency and shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test).	Continuous	Field Operating/Maintenance Records Review Operating Practice	
51.3	Recordkeeping. Keep records as required by Condition 51.1 and 51.2, and in accordance with Condition 90.	Continuous	HSE Records Review	
51.4	Reporting. For each affected unit that periodically determines the fuel sulfur content under Condition 51.1.a, the owner or operator shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR 60.7(c) as summarized in Condition 32, except where otherwise approved by a custom fuel monitoring schedule. Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction.	Continuous	HSE Records Review	
40 CFR 63 NESHAP Subpart A -General Provisions				
52 - 52.2	NESHAP Subpart A. The Permittee shall comply with the applicable requirements of 40 C.F.R. 63 Subpart A in accordance with the provisions for applicability of Subpart A in 52.1. Table 8 to Subpart ZZZZ for EU IDs 68 and 116; and 52.2. Table 3 to Subpart CCCCCC for EU ID 118.	Continuous	HSE Records Review	

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NESHAP Subpart ZZZZ - Reciprocating Internal Combustion Engines				
53 - 53.2	NESHAPs Subpart ZZZZ Applicability. The Permittee shall comply with applicable requirements for existing22 (EU IDs 68 and 116) and new23 (EU IDs 3, 47, 49, 50, 64, and 93)stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions. 53.1. For EU IDs 68 and 116, existing stationary RICE units, the Permittee shall at all times comply with Conditions 54 through 57. 53.2. For EU IDs 3, 47, 49, 50, 64, and 93, new stationary RICE units, the Permittee shall meet the requirements of 40 C.F.R. 63 Subpart ZZZZ by meeting the requirements of 40 C.F.R. 60 Subpart IIII in Conditions 39 through 45. No further requirements apply for such engines under 40 C.F.R. 63.	Continuous	Field Operating/Maintenance Records Review Operating Practice HSE Records Review	
54-54.3	NESHAPs Subpart ZZZZ GAPCP, Operation and Maintenance Requirements. The Permittee shall comply with the following: 54.1. At all times, operate and maintain EU IDs 68 and 116 listed in Table A, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of EU IDs 68 and 116. 54.2. The Permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to either: a. the manufacturer's emission-related written instructions for operation and maintenance; or b. a maintenance plan developed by the Permittee which must provide, to the extent practicable, for the maintenance and operation of the engine(s) in a manner consistent with good air pollution control practice for minimizing emissions. 54.3. Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.	Continuous	Field Operating/Maintenance Records Review Operating Practice HSE Records Review	
55 - 55.4	NESHAP Subpart ZZZZ Work and Management Practices Standards. For EU IDs 68 and 116, the Permittee shall comply with the following work and management practices: 55.1. Except during periods of startup, the Permittee shall meet the following requirements: a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first; b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. 55.2 during periods of startup, the Permittee shall comply with Condition 54.3. 55.3 Demonstrate continuous compliance with the requirements in Conditions 55.1 and 55.2 by complying with Condition 54.2. 55.4. The Permittee has the option to utilize an oil analysis program in order to extend the specified oil change requirement in Condition 55.1.a, as described below: a.The oil analysis must be performed at the same frequency specified for changing the oil in 55.1.a. b.The analysis program must, at a minimum, analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: (i)Total Base Number is less than 30 percent of the Total Base Number of the oil when new; (ii)viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or (iii)percent water content (by volume) is greater than 0.5. c.If all of the condemning limits in Conditions 55.4.b(i) through 55.4.b(iii) are not exceeded, the Permittee is not required to change the oil. d.If any of the limits in Conditions 55.4.b(i) through 55.4.b(iii) is exceeded, the Permittee must change the oil within 2 business days of receiving the results of the analysis. (i)If the engine is not in operation when the results of the analysis are received, the Permittee must change the oil within 2 business days or before commencing operation, whichever is later. e.The analysis program must be part of the maintenance plan for the engine.	Intermittent	Field Operating/Maintenance Records Review Operating Practice	Permit Deviation Report submitted 5/30/2023 for failure to conduct timely oil analysis on EU IDs 68 and 116.

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56-56.3	NESHAP Subpart ZZZZ Recordkeeping Requirements. The Permittee shall keep records as follows: 56.1. If electing to operate and maintain EU IDs 68 and 116 according to a maintenance plan developed by the Permittee as allowed under Condition 54.2.b, keep records of the maintenance conducted on EU IDs 68 and 116 in order to demonstrate that the stationary RICE and after-treatment control device (if any) are operated and maintained according to the maintenance plan. 56.2. If electing to utilize the oil analysis program described in Condition 55.4, keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. 56.3. Keep records in a form suitable and readily available for expeditious review. Keep each record in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 C.F.R. 63.10(b)(1), except that all records may be retained off site.	Continuous	HSE Records Review	
57 - 57.2	NESHAP Subpart ZZZZ Reporting Requirements. The Permittee shall report, as follows: 57.1. Include in the operating report required by Condition 95 a report of all deviations as defined in 40 C.F.R. 63.6675 and of each instance in which an applicable requirement in 40 C.F.R. 63, Subpart A (Table 8 to Subpart ZZZZ) was not met. 57.2. Notify the Department in accordance with Condition 94 if any of the requirements in Conditions 53 through 57 were not met.	Continuous	HSE Records Review	
Subpart CCCCC (EU ID 118) - Gasoline Dispensing Facilities Subject to NESHAP				
58 - 58.1	NESHAP Subpart CCCCC Applicability. The Permittee shall upon startup comply with applicable requirements for a gasoline storage tank (EU ID 118) as a new GDF with a monthly throughput of greater than 10,000 gallons but less than 100,000 gallons of gasoline located at an area source of HAP emissions. 58.1. The Permittee shall, upon request by the Administrator, demonstrate that the monthly throughput for EU ID 118 is less than the 100,000-gallon threshold level. Keep records for a period of 5 years, to document monthly throughput beginning upon startup of EU ID 118.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
59-59.2	NESHAP Subpart CCCCC GAPCP. For EU ID 118 listed in Table A, the Permittee shall comply with the following: 59.1. At all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. 59.2. Keep applicable records and submit reports as specified in Conditions 61 and 62.	Continuous	HSE Records Review Field Operating/Maintenance Records Review	
60-60.1	NESHAP Subpart CCCCC Work and Management Practice Standards. The Permittee shall comply with the following work and management practice standards, as applicable for the monthly throughput of EU ID 118: 60.1. If EU ID 118 has a monthly throughput of less than 10,000 gallons of gasoline, comply with the requirements in 40 C.F.R. 63.11116, as follows: a. Do not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following: (i) Minimize gasoline spills; (ii) Clean up spills as expeditiously as practicable; (iii) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use; (iv) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators. (v) Have records available within 24 hours of a request by the Administrator to document your gasoline throughput.	Continuous	HSE Records Review	
60.2	If EU ID 118 has a monthly throughput of 10,000 gallons of gasoline or more, comply with the requirements in 40 C.F.R. 63.11117, as follows: a. Comply with Condition 60.1.a. b. Only load gasoline into the storage tank by utilizing submerged filling, 25 as specified in Conditions 60.2.b(i) and 60.2.b(ii). (i) Submerged fill pipes must be no more than 6 inches from the bottom of the tank. The 6 inches required distance shall be measured from the point in the opening of the submerged fill pipe that is the greatest distance from the bottom of the storage tank. (ii) Submerged fill pipes not meeting the specifications of Condition 60.2.b(i) are allowed if the owner or operator can demonstrate that the liquid level in the tank is always above the entire opening of the fill pipe. Documentation providing such demonstration must be made available for inspection by the Administrator's delegated representative during the course of a site visit.	Continuous	HSE Records Review	

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60.3-60.4	60.3. If the throughput of EU ID 118 equals or exceeds the 100,000 gallons monthly throughput threshold, EU ID 118 will remain subject to the requirements in 40 C.F.R. 63.11118, even if the throughput later falls below the applicable throughput threshold. a. Comply with Conditions 60.1.a and 60.2.b. b. Comply with the applicable requirements of 40 C.F.R. 63.11118 and all associated management practices, testing, monitoring, recordkeeping, notifications, and reporting requirements. 60.4. Comply with Condition 60.1.a when dispensing gasoline from a fixed gasoline storage tank at a GDF into a portable gasoline tank for the on-site delivery and subsequent dispensing of the gasoline into the fuel tank of a motor vehicle or other gasoline-fueled engine or equipment used within the stationary source.	Continuous	HSE Records Review	
61-61.4	NESHAP Subpart CCCCCC Recordkeeping Requirements. The Permittee shall keep records as follows: 61.1. Keep records to document monthly throughput beginning upon startup of EU ID 118. 61.2. Keep records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. 61.3. Keep records of actions taken during periods of malfunction to minimize emissions in accordance with Condition 59.1, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. 61.4. Keep records for a period of five (5) years.	Continuous	HSE Records Review	
62-62.3	NESHAP Subpart CCCCCC Reporting Requirements. The Permittee shall report as follows: 62.1. By March 15 of each year, report to the Administrator the following: a.number, duration, and a brief description of each type of malfunction which occurred during the previous calendar year and which caused or may have caused any applicable emission limitation to be exceeded; and b.a description of actions taken during a malfunction of an affected source to minimize emissions in accordance with Condition 59.1, including actions taken to correct a malfunction. 62.2. No report is necessary for a calendar year in which no malfunctions occurred. 62.3. Report as a permit deviation in accordance with Condition 94 should EU ID 118 reach the 100,000 gallons monthly throughput threshold.	Continuous	HSE Records Review	
National Emission Standards for Hazardous Air Pollutants (NESHAP)				
63	40 CFR 61 Subpart A - General Provisions & Subpart M - Asbestos 63 The Permittee shall comply with the requirements set forth in 40 CFR 61.145, 61.150, and 61.152 of Subpart M, and the applicable sections set forth in 40 CFR 61, Subpart A and Appendix A.	Continuous	Field Operating/Maintenance Records Review Operating Practice	
Protection of Stratospheric Ozone				
64-66	40 CFR 82 64 Subpart F. Refrigerant Recycling and Disposal. The Permittee shall comply with the applicable standards for recycling and emission reduction of refrigerants set forth in 40 CFR 82, Subpart F. 65 Subpart G - Significant New Alternative Policy. The Permittee shall comply with the applicable prohibitions set out in 40 CFR 82.174 (Protection of Stratospheric Ozone Subpart G - Significant New Alternatives Policy Program). 66 Subpart H - Halon Emissions Reduction. The Permittee shall comply with the applicable prohibitions set out in 40 CFR 82.270 (Protection of Stratospheric Ozone Subpart G - Halon Emission Reduction).	Continuous	Field Operating/Maintenance Records Review Operating Practice	

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General NSPS and NESHAP Requirements				
67-67.3	NESHAP Applicability Determinations. The Permittee shall determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 C.F.R. 63) in accordance with the procedures described in 40 C.F.R. 63.1(b). 67.1. If an owner or operator of a stationary source who is in the relevant source category determines that the source is not subject to a relevant standard or other requirement established under 40 C.F.R. 63, the owner or operator must keep a record as specified in 40 C.F.R. 63.10(b)(3). 67.2. If a source becomes affected by an applicable subpart of 40 C.F.R. 63, the owner or operator shall comply with such standard by the compliance date established by the Administrator in the applicable subpart, in accordance with 40 C.F.R. 63.6(c). 67.3. After the effective date of any relevant standard promulgated by the Administrator under this part, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator and the Department of the intended construction or reconstruction. The notification must be submitted in accordance with the procedures in 40 C.F.R. 63.9(b).	Continuous	HSE Records Review	
Section 6. General Conditions				
Standard Terms and Conditions				
68-70	68 Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit. 69 The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and re-issuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition. 70 The permit does not convey any property rights of any sort, nor any exclusive privilege.	Continuous	Advisory Provision	
71-73	71 Administration Fees. The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-403. 72 Assessable Emissions. The Permittee shall pay to the Department annual emission fees based on the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities 10 tons per year or greater. The quantity for which fees will be assessed is the lesser of 72.1. the stationary source's assessable potential to emit of 644 TPY; or 72.2. the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon credible evidence of actual annual emissions emitted during the most recent calendar year or another 12-month period approved in writing by the Department, when demonstrated by the most representative of one or more of the following methods: a. an enforceable test method described in 18 AAC 50.220; b. material balance calculations; c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or d. other methods and calculations approved by the Department, including appropriate vendor-provided emissions factors when sufficient documentation is provided. 73 Assessable Emission Estimates. Emission fees will be assessed as follows: 73.1. No later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions via the Department's Air Online Services (AOS) System at http://dec.alaska.gov/applications/air/airtoolsweb using the Permittee Portal option and filling out the Emission Fee Estimate form. Alternatively, the report may be submitted by: a E-mail under a cover letter using dec.aq.airreports@alaska.gov; or b hard copy to the following address: ADEC Air Permits Program, ATTN: Assessable Emissions Estimate, 555 Cordova Street, Anchorage, Alaska 99501. 73.2. The Permittee shall include with the assessable emissions report all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates. 73.3. If no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set out in Condition 72.1.	Continuous	HSE Records Review Accounting Records	

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Permit Condition		Compliance Status	Method Used to Determine Status	Comments
No.	Summary/Description		40 C.F.R. 71.6 (c) (5) (iii) (B)	
74-77	74 Good Air Pollution Control Practice. The Permittee shall do the following for EU IDs 4, 9 through 20, 23, 24, 69 through 71, 74, 75, 78, 94 through 105, 107 through 110, 111,112,114,115,117, and 123 through 125: 74.1 perform regular maintenance considering the manufacturer's or the operator's maintenance procedures; 74.2 keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and 74.3 keep a copy of either the manufacturer's or the operator's maintenance procedures. 75 Dilution. The Permittee shall not dilute emissions with air to comply with this permit. Monitoring shall consist of annual certification that the Permittee does not dilute emissions to comply with this permit. 76 Reasonable Precautions to Prevent Fugitive Dust. A person who causes or permits bulk materials to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air. 76.1 The Permittee shall keep records of: a complaints received by the Permittee and complaints received by the Department and conveyed to the Permittee; and b any additional precautions that are taken (i) to address complaints described in Condition 76.1.a or to address the results of Department inspections that found potential problems; and (ii) to prevent future dust problems. 77 Stack Injection. The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, except as authorized by a construction permit, Title V permit, or air quality control permit issued before October 1, 2004.	Continuous	Field Operating/Maintenance Records Review Operating Practice	
78-78.5	Air Pollution Prohibited. No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property. 78.1 Monitoring, Recordkeeping, and Reporting a. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 94. b. As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 78. 78.2 The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 78; or b. the Department notifies the Permittee that it has found a violation of Condition 78. 78.3 The Permittee shall keep records of a. the date, time, and nature of all emissions complaints received; b. the name of the person or persons that complained, if known; c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 72; and d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source. 78.4 With each operating report under Condition 95, the Permittee shall include a brief summary report which must include a. the number of complaints received; b. the number of times the Permittee or the Department found corrective action necessary; c. the number of times action was taken on a complaint within 24 hours; and d. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours. 78.5 The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.	Continuous	HSE Records Review	
79-79.2	Technology-Based Emission Standard. If an unavoidable emergency, malfunction (as defined in 18 AAC 50.235(d)), or non-routine repair (as defined in 18 AAC 50.990(64)), causes emissions in excess of a technology-based emission standard²⁶ listed in Conditions 41, 42, 48, 50, and 64 the Permittee shall 79.1. take all reasonable steps to minimize levels of emissions that exceed the standard; and 79.2. report in accordance with Condition 94.1.b; the report must include information on	Continuous	HSE Records Review	

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No.	Summary/Description		40 C.F.R. 71.6 (c) (5) (iii) (B)	
Open Burning Requirements				
80-80.2	Open Burning. If the Permittee conducts open burning at this stationary source, the Permittee shall comply with the requirements of 18 AAC 50.065. The Permittee shall comply as follows: 80.1 Keep written records to demonstrate that the Permittee complies with the limitations in this condition and the requirements of 18 AAC 50.065. Upon request by the Department, submit copies of the record; and 80.2 Include this condition in the annual certification conducted under Condition 96.	Continuous	Field Operating/Maintenance Records Review Operating Practice	
Section 7. General Source Testing and Monitoring Requirements				
81-84	81 Requested Source Tests. In addition to any source testing explicitly required by the permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements. 82 Operating Conditions. Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing 82.1 at a point or points that characterize the actual discharge into the ambient air; and 82.2 at the maximum rated burning or operating capacity of the emission unit or another rate determined by the Department to characterize the actual discharge into the ambient air. 83 Reference Test Methods. The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit: 83.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 CFR 60. 83.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 CFR 63. 83.3 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Reference Method 9 and may use the form in Section 11 to record data. 83.4 Source testing for emissions of total particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 CFR 60, Appendix A. 83.5 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 CFR 51, Appendix M, Methods 201 or 201A and 202. 83.6 Source testing for emissions of any pollutant may be determined using an alternative method approved by the Department in accordance with 40 CFR 63 Appendix A, Method 301. 84 Excess Air Requirements. To determine compliance with this permit, standard exhaust gas volumes must include only the volume of gases formed from the theoretical combustion of the fuel, plus the excess air volume normal for the specific emission unit type, corrected to standard conditions (dry gas at 68°F and an absolute pressure of 760 millimeters of mercury).	Continuous	HSE Records Review	
85-89	85 Test Exemption. The Permittee is not required to comply with Condition 87, 88, and 89 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 2.4), or under Condition 5,6 or 14.3, or Smoke/No Smoke Plan (Condition 2.5). 86 Test Deadline Extension. The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee. 87 Test Plans. Except as provided in Condition 85, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the emission unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under Condition 81 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be performed without resubmitting the plan. 88 Test Notification. Except as provided in Condition 85, at least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin. 89 Test Reports. Except as provided in Condition 85, within 60 days after completing a source test, the Permittee shall submit one certified copy of the results in the format set out in the Source Test Report Outline, adopted by reference in 18 AAC 50.030. The Permittee shall additionally certify the results in the manner set out in Condition 91. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.	Continuous	HSE Records Review	

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Permit Condition		Compliance Status	Method Used to Determine Status	Comments
No.	Summary/Description		40 C.F.R. 71.6 (c) (5) (iii) (B)	
Section 8. General Recordkeeping and Reporting Requirements				
Recordkeeping Requirements				
90-90.2	The Permittee shall keep all records required by this permit for at least five years after the date of collection, including: 90.1 Copies of all reports and certifications submitted pursuant to this section of this permit; and 90.2 Records of all monitoring required by this permit, and information about the monitoring including: a. the date, place, and time of sampling or measurements; b. the date(s) analyses were performed; c. the company or entity that performed the analyses; d. the analytical techniques or methods used; e. the results of such analyses; and f. the operating conditions as existing at the time of sampling or measurement.	Continuous	HSE Records Review	
91-92	91 Certification. The Permittee shall certify any permit application, report, affirmation, or compliance certification submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal. 91.1 The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if a. a certifying authority registered under AS 09.80.020 verifies that the electronic signature is authentic; and b. the person providing the electronic signature has made an agreement, with the certifying authority described in Condition 91.1.a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature. 92 Submittals. Unless otherwise directed by the Department or this permit, the Permittee shall submit one certified copy of reports, compliance certifications, and/or other submittals required by this permit. The Permittee may submit the documents by hard copy or electronically, as follows: 92.1 Submit hard copy to the following address: ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. 92.2 Provide electronic submittals either by: a. using the Department's Air Online Services (AOS) system at http://dec.alaska.gov/applications/air/airtoolsweb/ using the Permittee Portal option; or b. an email, under a cover letter, addressed to dec.aq.airreports@alaska.gov .	Continuous	HSE Records Review	
93	Information Requests. The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the Federal Administrator.	Continuous	HSE Records Review	

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Permit Condition		Compliance Status	Method Used to Determine Status	Comments
No.	Summary/Description		40 C.F.R. 71.6 (c) (5) (iii) (B)	
94-94.3	Excess Emissions and Permit Deviation Reports. 94.1 Except as provided in Condition 78, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows: a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report (i) emissions that present a potential threat to human health or safety; and (ii) excess emissions that the Permittee believes to be unavoidable; b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or non routine repair that causes emissions in excess of a technology based emission standard; c. report all other excess emissions and permit deviations (i) within 30 days of the end of the month in which the emissions or deviation occurs, except as provided in Conditions 94.1.c(ii) and 94.1.c.(iii); (ii) if a continuous or recurring exceeds emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 94.1.c(i); and (iii) according to the required deadline for failure to monitor, as required in Conditions 4.2.b and 10.1.b. 94.2 When reporting either excess emissions or permit deviations, the Permittee shall report using either the Department's online form, which can be found at http://dec.alaska.gov/applications/air/airtoolsweb using the Permittee Portal option, or if the Permittee prefers, the form contained in Section 13 of this permit. The Permittee must provide all information called for by the form that is used. https://myalaska.state.ak.us/deca/air/airtoolsweb/, or if the Permittee prefers, the form contained in Section 13 of this permit. The Permittee must provide all information called for by the form that is used. 94.3 If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.	Continuous	HSE Records Review	One Permit Deviation submitted 5/30/2023 was submitted within 30 days of the end of the month in which the deviation occurred. No compliance issues with Condition 94.
95-95.5	Operating Reports. During the life of this permit, the Permittee shall submit to the Department an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year. 95.1 The operating report must include all information required to be in operating reports by other conditions of this permit, for the period covered by the report. 95.2 When excess emissions or permit deviations that occurred during the reporting period are not reported under Condition 95.1, the Permittee shall identify a the date of the deviation; b the equipment involved; c the permit condition affected; d a description of the excess emissions or permit deviation; and e any corrective action or preventive measures taken and the date of such actions; or 95.3 When excess emissions or permit deviations have already been reported under Condition 94 the Permittee shall cite the date or dates of those reports. 95.4 The operating report shall include, for the period covered by the report, a listing of emissions monitored under Conditions 2.4.e, 2.5.c, 8.2, 11.1, 14.2, 49.1.b, and 60.3, which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report. a. the date of the emissions; b. the equipment involved; c. the permit condition affected; and d. the monitoring result which triggered the additional monitoring. 95.5 Transition from expired to renewed permit. For the first period of this renewed operating permit, also provide the previous permit's operating report elements covering that partial period immediately preceding the effective date of this renewed permit.	Continuous	HSE Records Review	

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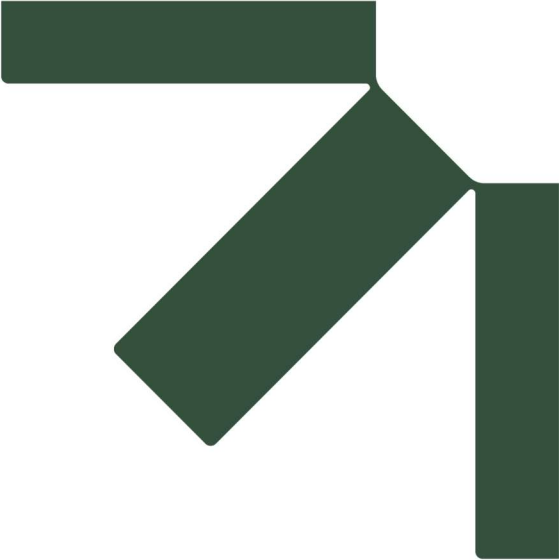
Permit Condition		Compliance Status	Method Used to Determine Status	Comments
No.	Summary/Description		40 C.F.R. 71.6 (c) (5) (iii) (B)	
96 - 96.3	Annual Compliance Certification. Each year by March 31, the Permittee shall compile and submit to the Department an annual compliance certification report according to Condition 92. 96.1 Certify the compliance status of the stationary source over the preceding calendar year consistent with the monitoring required by this permit, as follows: a. identify each term or condition set forth in Conditions 2 through Section 9, that is the basis of the certification; b. briefly described each method used to determine the compliance status; c. state whether compliance is intermittent or continuous; and d. identify each deviation and take it into account in the compliance certification; 96.2 Transition for expired to renewed permit. For the first period of the renewed operating permit, also provide the pervious permit's annual compliance certification report elements covering that partial period immediately preceding the effective date of this renewed permit. 96.3 In addition, submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/A OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.	Continuous	HSE Records Review	
97-97.4	Emission Inventory Reporting. The Permittee shall submit to the Department reports of actual emissions, by emission unit, of CO, NH3, NOx, PM10, PM2.5, SO2, VOCs and Lead (Pb) (and lead compounds) using the form in Section 14 of this permit, as follows: 97.1 Each year by April 30, if the stationary source's potential to emit emissions for the previous calendar year exceeds: a. 250 TPY of NH3, PM10, PM2.5 or VOCs; or b. 2,500 TPY of CO, NOx, or SOx 97.2 Every third year by April 30, if the stationary source's potential to emit for the previous calendar year (except actual emissions for Pb) equals or exceeds: a. 0.5 TPY of actual Pb, or b. 1,000 TPY of CO; or c. 100 TPY of SO2, NH3, PM10, PM2.5, NOx, or VOCs. 97.3 For reporting under Condition 97.2, the Permittee shall report in 2021 for calendar year 2020, 2024 for calendar year 2023, etc., in accordance with the EPA schedule. 97.4 Include in the report required by this condition, the required data elements contained within the form in Section 14 or those contained in Tables 2a and 2b of Appendix A to Subpart A of 40 CFR 51 and Emission Inventory Instructions available in Air Online Services (AOS) system for each emissions unit.	Continuous	HSE Records Review	
98 - 98.2	NSPS and NESHAP Reports. The Permittee shall: 98.1 Reports: Attach to the operating report required by Condition 95 for the period covered by the report, a copy of any NSPS and NESHAPs reports submitted to the US Environmental Protection Agency (EPA) Region 10; and 98.2 Waivers: Upon request by the Department, provide a written copy of any EPA-granted alternative monitoring requirement, custom monitoring schedule or waiver of the Federal emission standards, recordkeeping, monitoring, performance testing, or reporting requirements. The Permittee shall keep a copy of each US EPA issued monitoring waiver or custom monitoring schedule with the permit.	Continuous	HSE Records Review	

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Permit Condition		Compliance Status	Method Used to Determine Status	Comments
No.	Summary/Description		40 C.F.R. 71.6 (c) (5) (iii) (B)	
Section 8. Permit Changes and Renewal				
99-99.4	Permit Applications and Submittals. The Permittee shall comply with the following requirements for submitting application information to the EPA Region 10: 99.1 The Permittee shall provide a copy of each application for modification or renewal of this permit, including any compliance plan, or application addenda, at the time the application or addendum is submitted to the Department; 99.2 The information shall be submitted to EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101. 99.3 To the extent practicable, the Permittee shall provide to EPA applications in portable document format (PDF); MS Word format (.doc); or other computer-readable format compatible with EPA's national database management system; and 99.4 The Permittee shall maintain records as necessary to demonstrate compliance with this condition.	Continuous	HSE Records Review	
100	Emissions Trading. No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit.	Continuous	Advisory Provision	
101-101.4	Off Permit Changes. The Permittee may make changes that are not addressed or prohibited by this permit other than those subject to the requirements of 40 CFR Part 72 through 78 or those that are modifications under any provision of Title I of the Act to be made without a permit revision, provided that the following requirements are met: 101.1 Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition; 101.2 Provide contemporaneous written notice to EPA and the Department of each such change, except for changes that qualify as insignificant under 18 AAC 50.326(d)-(i). Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change; 101.3 The change shall not qualify for the shield under 40 CFR 71.6(f); 101.4 The Permittee shall keep a record describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.	Continuous	HSE Records Review	
102-102.3	Operational Flexibility. The Permittee may make changes within the Permittee stationary source without requiring a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes, do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions); 102.1 The Permittee shall provide EPA and the Department with a notification no less than 7 days in advance of the proposed change. 102.2 For each such change, the written notification required above shall include a brief description of the change within the Permittee stationary source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. 102.3 The permit shield described in 40 CFR 71.6(f) shall not apply to any change made pursuant to Condition 96.	Continuous	HSE Records Review	
103	Permit Renewal. To renew this permit, the Permittee shall submit an application under 18 AAC 50.326 no sooner than July 22, 2023 and no later than July 22,2024. The renewal application shall be complete before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the stationary source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 CFR 71.7(b) and 71.5(a)(1)(iii).	Continuous	HSE Records Review	

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Permit Condition		Compliance Status	Method Used to Determine Status	Comments
No.	Summary/Description		40 C.F.R. 71.6 (c) (5) (iii) (B)	
Section 9. Compliance Requirements				
General Compliance Requirements				
104 - 104.2	Compliance with permit terms and conditions is considered to be compliance with those requirements that are 104.1 included and specifically identified in the permit; or 104.2 determined in writing in the permit to be inapplicable.	Continuous	Advisory Provision	
105-105.3	The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14.120(c), 18 AAC 50, and, except for those terms or conditions designated in the permit as not Federally enforceable, the Clean Air Act, and is grounds for 105.1. an enforcement action; 105.2. permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or 105.3. denial of an operating permit renewal application.	Intermittent	HSE Document Review	See Permit Deviation submitted 5/30/2023.
106 - 109	106 For applicable requirements with which the stationary source is in compliance, the Permittee will continue to comply with such requirements. 107 For applicable requirements that will become effective during the permit term, the Permittee shall meet such requirements on a timely basis. 108 It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition. 109 The Permittee shall allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to 109.1 enter upon the premises where a source subject to the permit is located or where records required by the permit are kept; 109.2 have access to and copy any records required by the permit; 109.3 inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and 109.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.	Continuous	Advisory Provision	



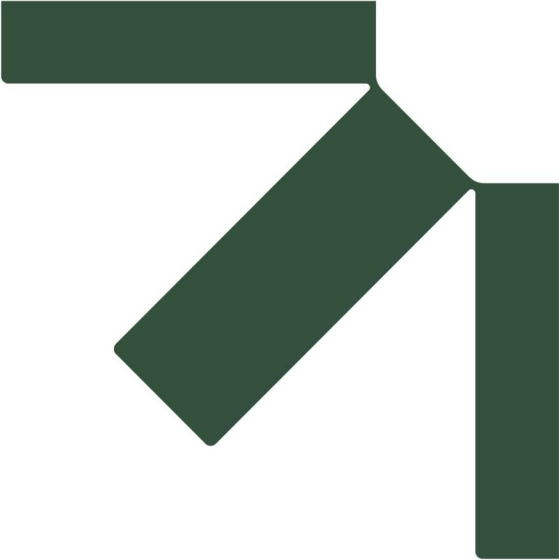
Appendix B Emission Units

Application for Renewal of an Air Quality Title V Operating Permit

Nikaitchuq Development

Eni US Operating Co. Inc.

July 22, 2024

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- B.1 Form B: Emission Unit Listing for This Application**
 - B.2 Form B1: Emission Unit Detail Form – External Combustion Equipment**
 - B.3 Form B2: Emission Unit Detail Form – Internal Combustion Equipment**
 - B.4 Form B4: Emission Unit Detail Form – Volatile Liquid Storage Tanks**
 - B.5 Form B5: Emission Unit Detail Form – Miscellaneous Emission Units**

FORM B
Emission Unit Listing For This Application

Permit Number: AQ0923TVP02

EMISSION UNIT LISTING: New, Modified, Previously Unpermitted, Replaced, Deleted					
Emission Unit ID Number	Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date	Notes
Emission Units To Be ADDED By This Application (New, Previously Unpermitted, or Replacement)					
N/A	N/A	N/A	N/A	N/A	N/A
Emission Units To Be MODIFIED By This Application					
On-Shore Development Drilling Rig					
9a	Rig Boiler #1	York-Shipley	3.35 MMBtu/hr	Unknown	Updated EU number, description, and rating/size
10a	Rig Boiler #2	York-Shipley	3.35 MMBtu/hr	Unknown	Updated EU number, description, and rating/size
11a	Air Heater		4.2 MMBtu/hr	Unknown	Updated EU number and name
Off-Shore Development Drilling Rig					
98a	Rig Boiler #1	Superior Boiler	3.3 MMBtu/hr	Unknown	Updated EU number and rating/size
99a	Rig Boiler #2	Superior Boiler	3.3 MMBtu/hr	Unknown	Updated EU number and rating/size
Emission Units To Be DELETED By This Application					
96	Multiple Chamber Incinerator	Pennram ESS C-300	300 lb/hr	March 23, 2010	Inoperable as of December 2023
107	Tent Heating Boiler #1	Burnham V1110-WO	2.43 MMBtu/hr	2011	Replaced with electric boiler in May 2022.
69	OPP WIF Boiler #1	Weil-McLain 780	0.935 MMBtu/hr	2010	Replaced with electric boiler in July 2021

SIGNIFICANT EMISSION UNIT LISTING: Title V permitted emission units that have not been modified				
Emission Unit ID Number	Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date
Oliktok Production Pad				
1	Gas Turbine #1	Solar Taurus 70	8,250 kW	2010
2	Gas Turbine #2	Solar Taurus 70	8,250 kW	2011
32	Dual Fuel Turbine #3	Solar Taurus 70	8,250 kW (Fuel Gas) 7,700 kW (Diesel)	2010
33	Gas Turbine #4	Solar Taurus 70	8,250 kW	2010
3	OPP Standby Generator – Reciprocating Engine	Detroit Diesel T1638A36	2,500 kW	2009
4	Daily Pilot & Purge Operation	Not Available	0.36 MMscf/day	2010
	Low Pressure Emergency Operation	Not Available	7 MMscf/day	
70	OPP WIF Boiler #2	Weil-McLain 780	0.935 MMBtu/hr	2010
71	OPP WIF Boiler #3	Weil-McLain 780	0.935 MMBtu/hr	2010

FORM B
Emission Unit Listing For This Application

78	Construction Power Generator #1 (NRE)	Caterpillar 3616C	2,763 bhp	Unknown
106	Standby Heater	Newpoint Thermal	10.5 MMBtu/hr	2011
Nikaitchuq Operations Center				
93	NOC Standby Generator Reciprocating Engine	MTU 16V 2000 G84	1,495 hp	2009
94	NOC Camp Boiler #1	Fulton Reliance	2.0 MMBtu/hr (Heat Input)	2011
95	NOC Camp Boiler #2	Fulton Reliance	2.0 MMBtu/hr (Heat Input)	2011
97	Construction Power Generator #2 (NRE)	Caterpillar C-32	1,381 bhp	Unknown
111	NOC Warm Storage Boiler #1	Weil-McClain 780	0.935 MMBtu/hr	2011
112	NOC Warm Storage Boiler #2	Weil-McClain 780	0.935 MMBtu/hr	2011
118	Gasoline Dispensing Facility Tank	Storage Tank	12,000 gallons	2013
Spy Island Drillsite				
47	SID Standby Generator E04 – Reciprocating Engine	MTU 16V 4000 G83	3,351 bhp	2010 (April 2012 installation)
49	SID Standby Generator E07 – Reciprocating Engine	Caterpillar 3516C	3,635 bhp	August 31, 2006 (October 14, 2011 installation)
50	Fire Water Pump	John Deere 6068 E	183 bhp	2010
108	Tent Heating Boiler #2	Burnham V1110-WO	2.43 MMBtu/hr	2011
109	SID WIF Boiler #1	Burnham FD-38	1.73 MMBtu/hr	2011
110	SID WIF Boiler #2	Burnham FD-38	1.73 MMBtu/hr	2011
114	Mud Tank Farm Boiler #2	Burnham FD-14	0.65 MMBtu/hr	2011
115	Mud Tank Farm Boiler #1	Burnham FD-14	0.65 MMBtu/hr	2011
64	SID WIF Generator Reciprocating Engine	John Deere 6090HF485	422 bhp	2011
68	Cement Pump Engine #1	Detroit Diesel 8V-71N	320 bhp	1980
116	Cement Pump Engine #2	Detroit Diesel 8V-71N	320 bhp	1980
123	Construction Well Test Flare	Pilot, Purge and Process Gas	3 MMscf/day	TBD
On-Shore Development Drilling Rig				
12	Rig Heater #2	Tioga 1DF-21B0	4.2 MMBtu/hr	Unknown
13	Rig Heater #3	Tioga 1DF-11C0	2.5 MMBtu/hr	Unknown
14	Rig Engine #1 (NRE)	Caterpillar D399	1,128 bhp	Unknown
15	Rig Engine #2 (NRE)	Caterpillar D399	1,128 bhp	Unknown
16	Rig Engine #3 (NRE)	Caterpillar D399	1,128 bhp	Unknown
17	Rig Engine #4 (NRE)	Caterpillar D399	1,128 bhp	Unknown
18	Coldstart Motors (NRE)	Caterpillar D353	233 bhp	Unknown
74	Reciprocating Engine #1 (NRE)	Cummins	303 bhp	Unknown
75	Reciprocating Engine #2 (NRE)	Cummins	303 bhp	Unknown
Off-Shore Development Drilling Rig				
98	Rig Boiler #1	Superior Boiler	4.18 MMBtu/hr (Heat Input)	2011
99	Rig Boiler #2	Superior Boiler	4.18 MMBtu/hr (Heat Input)	2011
100	Rig Heater #1	Dick's Air Heater	3.5 MMBtu/hr	2011
101	Rig Heater #2	Dick's Air Heater	5.0 MMBtu/hr	2011
102	Reciprocating Engine #1 (NRE)	Caterpillar 3516	2,523 bhp	2011
103	Reciprocating Engine #2 (NRE)	Caterpillar 3516	2,523 bhp	2011

FORM B
Emission Unit Listing For This Application

104	Reciprocating Engine #3 (NRE)	Caterpillar 3516	2,523 bhp	2011
105	Reciprocating Engine #4 (NRE)	Caterpillar 3512	1,879 bhp	2011
117	Mud Pump #3 Coldstart (NRE)	Deutz AG	63 bhp	2011
124	Reciprocating Engine #5 (NRE)	Caterpillar 3516B	2,150 bhp	2017
125	Reciprocating Engine #6 (NRE)	Caterpillar 3516C	2,722 bhp	2017
Partial List of Intermittent Well Servicing Equipment (Workover Rig)				
19	Peak Crane (NRE)	Non-road crane engine	650 bhp	Unknown
20	Manitowoc Crane (NRE)	Non-road crane engine	575 bhp	Unknown
23	Hot Oiler Boiler/Heater #1	Heater	6 MMBtu/hr	Unknown
24	Hot Oiler Boiler/Heater #2	Heater	9.5 MMBtu/hr	Unknown

FORM B
Emission Unit Listing For This Application

INSIGNIFICANT EMISSION UNIT LISTING: Insignificant Title V permitted emission units that have not been modified				
Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date	Basis for Insignificant Status
Oliktok Production Pad				
T-17160	Condensate Tank S	1,176 gallons	Unknown	18 AAC 50.326(g)(3)
	WIF Bulk Rectangular Diesel Tank	3,000 gallons	Unknown	18 AAC 50.326(g)(3)
	WIF Boiler Diesel Fuel Tank	150 gallons	Unknown	18 AAC 50.326(g)(3)
5	Slop Oil Tank A	750 barrels	2010	18 AAC 50.326(e)
6	Slop Oil Tank B	750 barrels	2010	18 AAC 50.326(e)
34	Slop Oil Tank C	750 barrels	2010	18 AAC 50.326(e)
35	Slop Oil Tank D	750 barrels	2010	18 AAC 50.326(e)
36	Slop Oil Tank E	750 barrels	2010	18 AAC 50.326(e)
37	Slop Oil Tank F	750 barrels	2010	18 AAC 50.326(e)
38	Slop Oil Tank G	750 barrels	2010	18 AAC 50.326(e)
39	Slop Oil Tank H	750 barrels	2010	18 AAC 50.326(e)
40	Slop Oil Tank I	750 barrels	2010	18 AAC 50.326(e)
41	Slop Oil Tank J	750 barrels	2010	18 AAC 50.326(e)
8	Base Oil Tank K	400 barrels	2010	18 AAC 50.326(e)
7	Diesel Tank O	600 barrels	2010	18 AAC 50.326(e)
42	Diesel Tank P	600 barrels	2010	18 AAC 50.326(e)
119	Diesel Tank Q	600 barrels	2010	18 AAC 50.326(e)
43	Corrosion Inhibitor Storage Tank R	600 barrels	2010	18 AAC 50.326(e)
44	Antifoam Storage Tank N	200 barrels	2010	18 AAC 50.326(g)(3)
45	Scale Inhibitor Storage Tank L	200 barrels	2010	18 AAC 50.326(g)(3)
46	Emulsion Breaker Storage Tank M	200 barrels	2010	18 AAC 50.326(g)(3)
Nikaitchuq Operations Center				
T-12	Diesel Emergency Generator Engine Tank	5,000 gallons	Unknown	18 AAC 50.326(g)(3)
T-18182	NOC Helicopter Hanger Jet-A Tank	2,000 gallons	Unknown	18 AAC 50.326(g)(3)
120	Diesel Dispensing Facility Tank 110	12,000 gallons	2014	18 AAC 50.326(e)
121	Diesel Dispensing Facility Tank 120	12,000 gallons	2014	18 AAC 50.326(e)
122	Diesel Dispensing Facility Tank 130	12,000 gallons	2014	18 AAC 50.326(e)
Spy Island Drillsite				
	WIF Storage Tank	3,570 gallons	Unknown	18 AAC 50.326(g)(3)
15-TK-26	Motor Room, Diesel Day Tank	3,245 gallons	Unknown	18 AAC 50.326(g)(3)
15-TK-48	Pipe Shed Diesel Tank	1,818 gallons	Unknown	18 AAC 50.326(g)(3)
15-TK-49	Pipe Shed Diesel Tank	9,873 gallons	Unknown	18 AAC 50.326(g)(3)
15-TK-50	Pipe Shed Diesel Tank	9,957 gallons	Unknown	18 AAC 50.326(g)(3)
51	Diesel Tank A	750 barrels	2010	18 AAC 50.326(e)
52	Diesel Tank B	750 barrels	2010	18 AAC 50.326(e)
53	Diesel Tank C	750 barrels	2010	18 AAC 50.326(e)
54	Base Oil Tank D	750 barrels	2010	18 AAC 50.326(e)
55	Base Oil Tank E	750 barrels	2010	18 AAC 50.326(e)
56	Corrosion Inhibitor Tank F	750 barrels	2010	18 AAC 50.326(e)
57	Scale Inhibitor Tank G	400 barrels	2011	18 AAC 50.326(e)
58	Friction Reducer Tank H	750 barrels	2011	18 AAC 50.326(e)
59	Future Chemical Tank I	750 barrels	TBD	18 AAC 50.326(e)
60	Contaminated Base Oil/ Diesel Tank J	200 barrels	2010	18 AAC 50.326(g)(3)
61	Biocide Tank K	750 barrels	2010	18 AAC 50.326(e)
62	Future Chemical Tank L	750 barrels	TBD	18 AAC 50.326(e)

FORM B
Emission Unit Listing For This Application

63	Disposal Fluids Tank U	1,000 barrels	2011	18 AAC 50.326(e)

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	9a, 10a / Base
2.	Date installation/construction commenced	Unknown
3.	Date installed	2011
4.	Emission Unit serial number	15-23042, 15-23055
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	York-Shipley
7.	Description of emission unit, including type of boiler/heater and firing method: Rig Boiler #1 and #2	
8.	Rated design capacity (heat input, MMBtu/hr)	3.35 MMBtu/hr, each
9.	Maximum steam production rate (lbs/hr)	Unknown
10.	Maximum steam pressure (psi)	Unknown
11.	Maximum steam temperature (°F)	Unknown

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 30.7 gallons/hr, each

13.	Is waste heat utilized for any purpose? If yes, describe: No

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0932TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitoring, recordkeeping, and reporting (MR&R) in accordance with Conditions 1.4, and 2 through 4.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. MR&R in accordance with Conditions 7.4, and 8 through 10.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R in accordance with Conditions 15.1 and 27.
AQ0923TVP02 – Condition 18.1	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1); Condition 3, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	In all situations, operate the actual drilling rig with equipment that does not exceed the cumulative boiler and heater rating of 19.3 MMBtu/hr.	Yes	MR&R as required by Condition 20.

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR. 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 18.1b.	Yes	MR&R as required by Condition 20.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart DDDDD	The stationary source is not a major source of hazardous air pollutants.
40 CFR 63 Subpart JJJJJ	These emission units are “temporary boilers” as defined in 40 CFR 63.11237. “Temporary boilers” are exempt from this rule per 40 CFR 63.11195(h).

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	11a, 12 / Base
2.	Date installation/construction commenced	Unknown
3.	Date installed	2011
4.	Emission Unit serial number	
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Tioga
7.	Description of emission unit, including type of boiler/heater and firing method: Tioga 1DF-21B0	
8.	Rated design capacity (heat input, MMBtu/hr)	4.2 MMBtu/hr, each
9.	Maximum steam production rate (lbs/hr)	Unknown
10.	Maximum steam pressure (psi)	Unknown
11.	Maximum steam temperature (°F)	Unknown

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 30.7 gallons/hr, each

13.	Is waste heat utilized for any purpose? If yes, describe: No

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0932TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitoring, recordkeeping, and reporting (MR&R) in accordance with Conditions 1.4, and 2 through 4.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. MR&R in accordance with Conditions 7.4, and 8 through 10.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes	MR&R in accordance with Conditions 15.1 and 27.
AQ0923TVP02 – Condition 18	18 AAC 50.326(j); 40 CFR 71.6(a)(1); Condition 3 Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	In all situations, operate the actual drilling rig with equipment that does not exceed the cumulative engine rating of 5,400 bhp.	Yes	MR&R as required by Condition 20.

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR. 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 18.1b.	Yes	MR&R as required by Condition 20.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart DDDDD	The stationary source is not a major source of hazardous air pollutants.
40 CFR 63 Subpart JJJJJ	These emission units are “temporary boilers” as defined in 40 CFR 63.11237. “Temporary boilers” are exempt from this rule per 40 CFR 63.11195(h).

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	13 / Base
2.	Date installation/construction commenced	Unknown
3.	Date installed	2011
4.	Emission Unit serial number	Unknown
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Tioga
7.	Description of emission unit, including type of boiler/heater and firing method: Tioga 1DF-11C0	
8.	Rated design capacity (heat input, MMBtu/hr)	2.5 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	Unknown
10.	Maximum steam pressure (psi)	Unknown
11.	Maximum steam temperature (°F)	Unknown

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 18.3 gallons/hr

13.	Is waste heat utilized for any purpose? If yes, describe: No

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0932TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitoring, recordkeeping, and reporting (MR&R) in accordance with Conditions 1.4, and 2 through 4.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. MR&R in accordance with Conditions 7.4, and 8 through 10.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R in accordance with Conditions 15.1 and 27.
AQ0923TVP02 – Condition 18	18 AAC 50.326(j); 40 CFR 71.5(c)(3) Condition 3, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	In all situations, operate the actual drilling rig with equipment that does not exceed the cumulative boiler and heater rating of 19.3 MMBtu/hr.	Yes	MR&R as required by Condition 20.

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR. 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 18.1b.	Yes	MR&R as required by Condition 20.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart DDDDD	The stationary source is not a major source of hazardous air pollutants.
40 CFR 63 Subpart JJJJJ	These emission units are “temporary boilers” as defined in 40 CFR 63.11237. “Temporary boilers” are exempt from this rule per 40 CFR 63.11195(h).

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	23 / Base
2.	Date installation/construction commenced	Unknown
3.	Date installed	Unknown
4.	Emission Unit serial number	Unknown
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Unknown
7.	Description of emission unit, including type of boiler/heater and firing method: Hot Oil Boiler/Heater #1	
8.	Rated design capacity (heat input, MMBtu/hr)	6 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	Unknown
10.	Maximum steam pressure (psi)	Unknown
11.	Maximum steam temperature (°F)	Unknown

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 48.8 gallons/hr

13.	Is waste heat utilized for any purpose? If yes, describe: No

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Visible emissions may not reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitoring, recordkeeping, and reporting (MR&R) as required by Conditions 1.3 and 2 through 4.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Particulate matter emissions may not exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	MR&R in accordance with Conditions 7.3 and 11 through 13.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	Sulfur compound emissions may not exceed 500 ppm averaged over three hours.	Yes	MR&R as required by Conditions 15.1 and 27.

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 19	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1); Condition 4, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	Operate actual Workover Rigs similar or smaller than the Workover Rig presented as EU IDs 19 through 24 in Table A; In all situations, operate boilers and heaters with cumulative rating not exceeding 15.5 MMBtu/hr.	Yes	MR&R as required by Condition 20.
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS1	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 19.2.	Yes	MR&R as required by Condition 20.

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 26.2	18 AAC 50.040(j) & 50.326(j); 40 CFR 71.6(a); Condition 18.2, Minor Permit AQ0923MSS11	NO ₂ and SO ₂ Ambient Air Quality Protection	Limit operation of the Workover Rig to 55 days per consecutive 12-month period.	Yes	MR&R as required by Conditions 26.2a through 26.2d.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a) Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart DDDDD	The stationary source is not a major source of hazardous air pollutants.
40 CFR 63 Subpart JJJJJ	These emission units are “temporary boilers” as defined in 40 CFR 63.11237. “Temporary boilers” are exempt from this rule per 40 CFR 63.11195(h).

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	24 / Base
2.	Date installation/construction commenced	Unknown
3.	Date installed	Unknown
4.	Emission Unit serial number	Unknown
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Unknown
7.	Description of emission unit, including type of boiler/heater and firing method: Hot Oil Boiler/Heater #2	
8.	Rated design capacity (heat input, MMBtu/hr)	9.5 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	Unknown
10.	Maximum steam pressure (psi)	Unknown
11.	Maximum steam temperature (°F)	Unknown

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 69.3 gallons/hr

13.	Is waste heat utilized for any purpose? If yes, describe: No

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Visible emissions may not reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitoring, recordkeeping, and reporting (MR&R) as required by Conditions 1.3 and 2 through 4.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Particulate matter emissions may not exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	MR&R in accordance with Conditions 7.3 and 11 through 13.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	Sulfur compound emissions may not exceed 500 ppm averaged over three hours.	Yes	MR&R as required by Conditions 15.1 and 27.

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 19	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1); Condition 4, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	Operate actual Workover Rigs similar or smaller than the Workover Rig presented as EU IDs 19 through 24 in Table A; In all situations, operate boilers and heaters with cumulative rating not exceeding 15.5 MMBtu/hr.	Yes	MR&R as required by Condition 20.
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a) Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 19.2.	Yes	MR&R as required by Condition 20.

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 26.2	18 AAC 50.040(j) & 50.326(j); 40 CFR 71.6(a); Condition 18.2, Minor Permit AQ0923MSS11	NO ₂ and SO ₂ Ambient Air Quality Protection	Limit operation of the Workover Rig to 55 days per consecutive 12-month period.	Yes	MR&R as required by Conditions 26.2a through 26.2d.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	Monitor, record, and report as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart DDDDD	The stationary source is not a major source of hazardous air pollutants.
40 CFR 63 Subpart JJJJJ	These emission units are “temporary boilers” as defined in 40 CFR 63.11237. “Temporary boilers” are exempt from this rule per 40 CFR 63.11195(h).

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	70, 71 / Base
2.	Date installation/construction commenced	Unknown
3.	Date installed	May 2010
4.	Emission Unit serial number	CP5808338, CP5808337
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Weil-McLain
7.	Description of emission unit, including type of boiler/heater and firing method: OPP WIF Boiler #2 and OPP WIF Boiler #3; Weil-McLain 780 Diesel-fired Boilers	
8.	Rated design capacity (heat input, MMBtu/hr)	0.935 MMBtu/hr, each
9.	Maximum steam production rate (lbs/hr)	Unknown
10.	Maximum steam pressure (psi)	Unknown
11.	Maximum steam temperature (°F)	Unknown

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	6.8 gallons/hr, each

13.	Is waste heat utilized for any purpose? If yes, describe: No

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Visible emissions may not reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitoring, recordkeeping, and reporting (MR&R) as required by Condition 1.2.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Particulate matter emissions may not exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	MR&R in accordance with Condition 7.2.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	Sulfur compound emissions may not exceed 500 ppm averaged over three hours.	Yes	MR&R as required by Conditions 15.1 and 27.
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3) Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 23.2b	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Stack Configuration	The stack for this EU may be capped.	Yes	N/A – Advisory condition
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11,	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart DDDDD	The stationary source is not a major source of hazardous air pollutants.
40 CFR 63 Subpart JJJJJ	Per 40 CFR 63.11237, emission units are not subject to the requirements of 40 CFR 63 Subpart JJJJJ because units do not heat water to recover thermal energy in the form of steam and/or hot water.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	94, 95 / Base
2.	Date installation/construction commenced	Unknown
3.	Date installed	January 2011
4.	Emission Unit serial number	801005957, 801005958
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Fulton Reliance
7.	Description of emission unit, including type of boiler/heater and firing method: NOC Camp Boiler #1 and NOC Camp Boiler #2 Fulton Reliance Propane-fired Boilers	
8.	Rated design capacity (heat input, MMBtu/hr)	2.0 MMBtu/hr, each
9.	Maximum steam production rate (lbs/hr)	Unknown
10.	Maximum steam pressure (psi)	Unknown
11.	Maximum steam temperature (°F)	Unknown

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Propane	22.1 gal/hr, each

13.	Is waste heat utilized for any purpose? If yes, describe: No

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Visible emissions may not reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition VIII. Monitor, recordkeeping, and reporting (MR&R) in accordance with Condition 1.1.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. MR&R in accordance with Condition 7.1.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	Sulfur compound emissions may not exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R in accordance with Conditions 15.1 and 27.
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 23.2b	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Stack Configuration	The stack for this EU may be capped.	Yes	N/A – Advisory condition
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record Review
AQ0923TVP02 – Condition 27.3	, 18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only propane with sulfur content not to exceed 185 ppmw.	Yes	MR&R as required by Conditions 27.3a through 27.3d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	Monitor, record, and report as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart DDDDD	The stationary source is not a major source of hazardous air pollutants.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	98a, 99a / Base
2.	Date installation/construction commenced	Unknown
3.	Date installed	2011
4.	Emission Unit serial number	
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Superior
7.	Description of emission unit, including type of boiler/heater and firing method: Rig Boiler #1 and #2	
8.	Rated design capacity (heat input, MMBtu/hr)	3.3 MMBtu/hr, each
9.	Maximum steam production rate (lbs/hr)	Unknown
10.	Maximum steam pressure (psi)	Unknown
11.	Maximum steam temperature (°F)	Unknown

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 30.5 gallons/hr, each

13.	Is waste heat utilized for any purpose? If yes, describe: No

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Applicable Requirements Specific to Emission Unit (attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0932TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitoring, recordkeeping, and reporting (MR&R) in accordance with Conditions 1.4, and 2 through 4.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. MR&R in accordance with Conditions 7.4, and 8 through 10.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R in accordance with Conditions 15.1 and 27.
AQ0923TVP02 – Condition 18	18 AAC 50.326(j); 40 CFR 71.6(a)(1); Condition 3, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	In all situations, operate the actual drilling rig with equipment that does not exceed the cumulative boiler and heater rating of 16.9 MMBtu/hr.	Yes	MR&R as required by Condition 20.

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR. 71.6(a) Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 18.2b.	Yes	MR&R as required by Condition 20.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart DDDDD	The stationary source is not a major source of hazardous air pollutants.
40 CFR 63 Subpart JJJJJ	These emission units are “temporary boilers” as defined in 40 CFR 63.11237. “Temporary boilers” are exempt from this rule per 40 CFR 63.11195(h).

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	100 / Base
2.	Date installation/construction commenced	Unknown
3.	Date installed	2011
4.	Emission Unit serial number	AH 120
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Dick's
7.	Description of emission unit, including type of boiler/heater and firing method: Rig Heater #1; Diesel-fired Heater	
8.	Rated design capacity (heat input, MMBtu/hr)	3.5 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	Unknown
10.	Maximum steam pressure (psi)	Unknown
11.	Maximum steam temperature (°F)	Unknown

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	25.5 gallons/hr

13.	Is waste heat utilized for any purpose? If yes, describe: No

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0932TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitoring, recordkeeping, and reporting (MR&R) in accordance with Conditions 1.4, and 2 through 4.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. MR&R in accordance with Conditions 7.4, and 8 through 10.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R in accordance with Conditions 15.1 and 27.
AQ0923TVP02 – Condition 18	18 AAC 50.326(j); 40 CFR 71.6(a)(1); Condition 3, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	In all situations, operate the actual drilling rig with equipment that does not exceed the cumulative boiler and heater rating of 16.9 MMBtu/hr.	Yes	MR&R as required by Condition 20.

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR. 71.6(a) Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a) Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 18.2b.	Yes	MR&R as required by Condition 20.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart DDDDD	The stationary source is not a major source of hazardous air pollutants.
40 CFR 63 Subpart JJJJJ	These emission units are “temporary boilers” as defined in 40 CFR 63.11237. “Temporary boilers” are exempt from this rule per 40 CFR 63.11195(h).

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	101 / Base
2.	Date installation/construction commenced	Unknown
3.	Date installed	2011
4.	Emission Unit serial number	AH 122
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Dick's
7.	Description of emission unit, including type of boiler/heater and firing method: Rig Heater #2; Diesel-fired Heater	
8.	Rated design capacity (heat input, MMBtu/hr)	5.0 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	Unknown
10.	Maximum steam pressure (psi)	Unknown
11.	Maximum steam temperature (°F)	Unknown

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	36.5 gallons/hr

13.	Is waste heat utilized for any purpose? If yes, describe: No

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Applicable Requirements Specific to Emission Unit (attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0932TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitoring, recordkeeping, and reporting (MR&R) in accordance with Conditions 1.4, and 2 through 4.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. MR&R in accordance with Conditions 7.4, and 8 through 10.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R in accordance with Conditions 15.1 and 27.
AQ0923TVP02 – Condition 18	18 AAC 50.326(j); 40 CFR 71.6(a)(1) Condition 3, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	In all situations, operate the actual drilling rig with equipment that does not exceed the cumulative boiler and heater rating of 16.9 MMBtu/hr.	Yes	MR&R as required by Condition 20

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR. 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 18.2b.	Yes	MR&R as required by Condition 20.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	Monitor, record, and report as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart DDDDD	The stationary source is not a major source of hazardous air pollutants.
40 CFR 63 Subpart JJJJJ	These emission units are “temporary boilers” as defined in 40 CFR 63.11237. “Temporary boilers” are exempt from this rule per 40 CFR 63.11195(h).

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	106 / Base
2.	Date installation/construction commenced	2010
3.	Date installed	November 2011
4.	Emission Unit serial number	PFU08-Z-55420
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Newpoint Thermal 7129
7.	Description of emission unit, including type of boiler/heater and firing method: Fuel Gas-Fired Standby Heater/Boiler	
8.	Rated design capacity (heat input, MMBtu/hr)	10.5 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	Unknown
10.	Maximum steam pressure (psi)	Unknown
11.	Maximum steam temperature (°F)	Unknown

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Natural Gas	Approximately 10,500 scf/hr

13.	Is waste heat utilized for any purpose? If yes, describe: No

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Visible emissions may not reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition VIII. Monitoring, recordkeeping, and reporting (MR&R) in accordance with Condition 1.1.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. MR&R in accordance with Condition 7.1.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	Sulfur compound emissions may not exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R in accordance with Conditions 15.1 and 27.
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 23.2b	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Stack Configuration	The stack for this EU may be capped.	Yes	N/A – Advisory condition
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record Review
AQ0923TVP02 – Condition 27.1	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11,	SO ₂ Ambient Air Quality Protection	Burn only natural gas with a hydrogen sulfide content that does not exceed 250 ppmv (on an instantaneous basis at standard conditions).	Yes	MR&R as required by Conditions 27.1a through 27.1d.
AQ0923TVP02 – Condition 35	18 AAC 50.040(a)(1); 40 CFR 60.11(d)	Subpart A Good Air Pollution Control Practice	At all times, including periods of startup, shutdown, and malfunction, to the extent practicable, maintain and operate equipment, including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.	Yes	Reasonable inquiry / records review

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 36	18 AAC 50.040(a)(1); 40 CFR 60.12	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 41, 42, 48 and 50 nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether the emission unit would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	N/A	N/A – Advisory Provision
AQ0923TVP02 – Condition 38	18 AAC 50.040(a)(2)(D); 40 CFR 60.48c(g) & (i)	NSPS Subpart Dc Fuel Consumption	Record the amounts of each fuel combusted during each day or calendar month and maintain records.	Yes	MR&R as required by Conditions 38 or 38.1.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart DDDDD	The stationary source is not a major source of hazardous air pollutants.
40 CFR 63 Subpart JJJJJ	Per 40 CFR 63.11195(e), emission unit is not subject to the requirements of 40 CFR 63 Subpart JJJJJ because units are gas-fired boilers as defined in the subpart.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	108 / Base
2.	Date installation/construction commenced	Unknown
3.	Date installed	September 2011 / October 2011
4.	Emission Unit serial number	65098973
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Burnham
7.	Description of emission unit, including type of boiler/heater and firing method: Burnham V1110-WO Tent Heating Boiler #2	
8.	Rated design capacity (heat input, MMBtu/hr)	2.43 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	Unknown
10.	Maximum steam pressure (psi)	Unknown
11.	Maximum steam temperature (°F)	Unknown

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 17.7 gal/hr

13.	Is waste heat utilized for any purpose? If yes, describe: No

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0932TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitoring, recordkeeping, and reporting (MR&R) in accordance with Conditions 1.4, and 2 through 4.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. MR&R in accordance with Conditions 7.4, and 8 through 10.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R in accordance with Conditions 15.1 and 27.
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3) Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 23.2b	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR. 71.6(a) Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Stack Configuration	The stack for this EU may be capped.	Yes	N/A – Advisory condition
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart DDDDD	The stationary source is not a major source of hazardous air pollutants.
40 CFR 63 Subpart JJJJJ	Per 40 CFR 63.11237, emission units are not subject to the requirements of 40 CFR 63 Subpart JJJJJ because units do not heat water to recover thermal energy in the form of steam and/or hot water.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	109, 110 / Base
2.	Date installation/construction commenced	August 2010
3.	Date installed	September 2011
4.	Emission Unit serial number	65211841, 65211842
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Burnham
7.	Description of emission unit, including type of boiler/heater and firing method: Burnham FD-38 WIF Boiler #1 and #2	
8.	Rated design capacity (heat input, MMBtu/hr)	1.73 MMBtu/hr, each
9.	Maximum steam production rate (lbs/hr)	Unknown
10.	Maximum steam pressure (psi)	Unknown
11.	Maximum steam temperature (°F)	Unknown

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 12.6 gal/hr, each

13.	Is waste heat utilized for any purpose? If yes, describe: No

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Visible emissions may not reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. For emissions units with potential emissions that are insignificant based on unrestricted operations but are significant per 18 AAC 50.326(d)(1)) listed in Table A, monitoring shall consist of an annual compliance certification
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Particulate matter emissions may not exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. For emissions units with potential emissions that are insignificant based on unrestricted operations but are significant per 18 AAC 50.326(d)(1)) listed in Table A, monitoring shall consist of an annual compliance certification
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	Sulfur compound emissions may not exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R in accordance with Conditions 15.1 and 27.
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3) Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 23.2b	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15; Minor Permit AQ0923MSS11,	General AAQS Provisions – Stack Configuration	The stack for this EU may be capped	Yes	N/A – Advisory condition
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11,	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart DDDDD	The stationary source is not a major source of hazardous air pollutants.
40 CFR 63 Subpart JJJJJ	Per 40 CFR 63.11237, emission units are not subject to the requirements of 40 CFR 63 Subpart JJJJJ because units do not heat water to recover thermal energy in the form of steam and/or hot water.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	111, 112 / Base
2.	Date installation/construction commenced	Unknown
3.	Date installed	January 2011
4.	Emission Unit serial number	CP6255198, CP6041726
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Weil-McLain
7.	Description of emission unit, including type of boiler/heater and firing method: Weil-McLain 780 Propane-fired Boilers NOC Warm Storage Boilers #1 and #2	
8.	Rated design capacity (heat input, MMBtu/hr)	0.935 MMBtu/hr, each
9.	Maximum steam production rate (lbs/hr)	Unknown
10.	Maximum steam pressure (psi)	Unknown
11.	Maximum steam temperature (°F)	Unknown

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Propane	935 scf/hr, each

13.	Is waste heat utilized for any purpose? If yes, describe: No

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Visible emissions may not reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition VIII. Monitoring, recordkeeping, and reporting (MR&R) in accordance with Condition 1.1.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. MR&R in accordance with Condition 7.1.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	Sulfur compound emissions may not exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R in accordance with Conditions 15.1 and 27.
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 23.2b	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Stack Configuration	The stack for this EU may be capped.	Yes	N/A – Advisory condition
AQ0923TVP02 – Condition 27.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11,	SO ₂ Ambient Air Quality Protection	Burn only propane with sulfur content not to exceed 185 ppmw.	Yes	MR&R as required by Conditions 27.3a through 27.3d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	Monitor, record, and report as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart DDDDD	The stationary source is not a major source of hazardous air pollutants.
40 CFR 63 Subpart JJJJJ	Per 40 CFR 63.11195(e), emission units are not subject to the requirements of 40 CFR 63 Subpart JJJJJ because units are gas-fired boilers as defined in the subpart.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	114, 115 / Base
2.	Date installation/construction commenced	Unknown
3.	Date installed	March 2011
4.	Emission Unit serial number	65147826, 65231894
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Burnham
7.	Description of emission unit, including type of boiler/heater and firing method: Burnham FD-14 Mud Tank Farm Boiler #1 and #2	
8.	Rated design capacity (heat input, MMBtu/hr)	0.65 MMBtu/hr, each
9.	Maximum steam production rate (lbs/hr)	Unknown
10.	Maximum steam pressure (psi)	Unknown
11.	Maximum steam temperature (°F)	Unknown

12. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 4.7 gallons/hr, each

13.	Is waste heat utilized for any purpose? If yes, describe: No

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Visible emissions may not reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. For emissions units with potential emissions that are insignificant based on unrestricted operations but are significant per 18 AAC 50.326(d)(1)) listed in Table A, monitoring shall consist of an annual compliance certification
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Particulate matter emissions may not exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. For emissions units with potential emissions that are insignificant based on unrestricted operations but are significant per 18 AAC 50.326(d)(1)) listed in Table A, monitoring shall consist of an annual compliance certification
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	Sulfur compound emissions may not exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. Monitor, record, and report (MR&R) in accordance with Conditions 15.1 and 27.
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.

FORM B1

Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 23.2b	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Stack Configuration	The stack for this EU may be capped	Yes	N/A – Advisory condition
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11,	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B1**Emission Unit Detail Form – External Combustion Equipment (Boilers and Heaters)**

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart DDDDD	The stationary source is not a major source of hazardous air pollutants.
40 CFR 63 Subpart JJJJJ	Per 40 CFR 63.11237, emission units are not subject to the requirements of 40 CFR 63 Subpart JJJJJ because units do not heat water to recover thermal energy in the form of steam and/or hot water.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	1, 2, 33 / Base
2.	Date installation/construction commenced ¹	2010
3.	Date installed	2010, 2011, 2010
4.	Emission Unit serial number	21213-01, 21213-02, 21213-03
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Solar Taurus 70 (AA28223000)
7.	Type of combustion device	Gas Turbine
8.	Rated design capacity (horsepower rating for engines)	NA
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	88.5 MMBtu/hr, each
10.	If used for power generation, electrical output (kW)	8.25 MW, each

- ¹. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Natural Gas	Approximately 82.6 Mscf/hr, each

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: NA

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Visible emissions may not reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition VIII. EU IDs 1, 2, and 33 burn only gas as fuel. Monitoring, recordkeeping, and reporting (MR&R) methods in accordance with Condition 1.1.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3), & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. EU IDs 1, 2, and 33 burn only gas as fuel. MR&R methods in accordance with Condition 7.1.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R methods in accordance with Conditions 15.1 and 27.
AQ0923TVP02 – Condition 20.3 and 20.3a	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1); Conditions 6 & 7, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements – Emissions and Fuel Control Settings and Stacks	The Permittee shall provide the revised settings and the reason for the revision in the operating report submitted under Condition 95 for that reporting period, if the Permittee makes changes to the emission and fuel control settings and stacks of the turbines, EU IDs 1, 2, 32, and 33.	Yes	Reporting in accordance with Conditions 20.3 and 20.3a.
AQ0923TVP02 – Condition 21	18 AAC 50.040(j) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R methods in accordance with Conditions 21.1 through 21.4.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 22	18 AAC 50.040(j)(4), 50.326(j)(4); 40 CFR 71.6(a)(3) & (c)(6)	Verification of Turbine Emission Factors	Conduct a winter performance test on one of EUs 1, 2, or 33 to verify CO and NO _x emission factors.	Yes	MR&R methods in accordance with Conditions 22.1 through 22.4.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j) & 50.326(j); 40 CFR 71.6(a) Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record Review
AQ0923TVP02 – Condition 27.1	18 AAC 50.040(j) & 50.326(j); 40 CFR 71.6(a) Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only natural gas with a hydrogen sulfide content that does not exceed 250 ppmv (on an instantaneous basis at standard conditions).	Yes	MR&R methods in accordance with Conditions 27.1a through 27.1d.
AQ0923TVP02 – Condition 31	18 AAC 50.040(a)(1); 40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, and Malfunction Requirements	Maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of the emission unit and malfunctions of associated air-pollution control equipment.	Yes	Recordkeeping in accordance with Condition 31
AQ0923TVP02 – Condition 32	18 AAC 50.040(a)(1); 40 CFR 60.7(c), 60.4375(a)	NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report	Submit Excess Emission and Monitoring Systems Performance (EEMSP) report as specified in this Condition.	Yes	MR&R methods in accordance with Conditions 32.1 through 32.4.
AQ0923TVP02 – Condition 33	18 AAC 50.040(a)(1); 40 CFR 60.7(c) & (d)	NSPS Subpart A Summary Report Form	Submit to ADEC and EPA semiannually a “summary report form” as specified in this Condition.	Yes	MR&R methods in accordance with Conditions 33, 33.1 and 33.2.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 36	18 AAC 50.040(a)(1); 40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 41, 42, 48, and 50, nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether the emission unit would have been in compliance with applicable requirements of 40 C.F.R. Part 60 if the appropriate performance or compliance test or procedure had been performed.	N/A	N/A – Advisory Provision
AQ0923TVP02 – Condition 37	18 AAC 50.040(a)(1); 40 CFR 60.12	NSPS Subpart A Concealment of Emissions	The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard.	Yes	Reasonable Inquiry
AQ0923TVP02 – Condition 46	18 AAC 50.040(a)(2)(QQ) & (j)(4) and 50.326(j); 40 CFR 71.6(a)(1) & 60.4305(a)	NSPS Subpart KKKK Applicability	For EU IDs 1, 2, 32, and 33 listed in Table A, the Permittee shall comply with the applicable requirements for stationary combustion turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005.	Yes	Record Review

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Conditions 47 and 47.1	18 AAC 50.040(a)(2)(QQ) & (j)(4) and 50.326(j); 40 CFR 71.6(a)(1) & 60.4333(a) & (b)	NSPS Subpart KKKK GAPCP and General Requirements	Operate and maintain air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.	Yes	Reasonable Inquiry / Record Review
AQ0923TVP02 – Condition 47.2	18 AAC 50.040(a)(2)(QQ) & (j)(4) and 50.326(j); 40 CFR 71.6(a)(1) & 60.4333(a) & (b)	NSPS Subpart KKKK GAPCP and General Requirements	When any of EU IDs 1, 2, 32, and 33 is equipped with heat recovery system and utilizes a common steam header with one or more combustion turbines, the Permittee shall either: a. Determine compliance with the NO _x emissions limit in Condition 48 by measuring the emissions combined with the emissions from the other unit(s) utilizing the common heat recovery unit; or b. Develop, demonstrate, and provide information satisfactory to the Administrator on methods for apportioning the combined gross energy output from the heat recovery unit for each of the affected combustion turbines. The Administrator may approve such demonstrated substitute methods for apportioning the combined gross energy output measured at the steam turbine whenever the demonstration ensures accurate estimation of emissions related under this part.	Yes	Reasonable Inquiry / Record Review
AQ0923TVP02 – Condition 48	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1), 60.4320(a), 60.4325, & Table 1 of Subpart KKKK	NSPS Subpart KKKK NO _x Standard	The Permittee shall meet the NO _x emission limit of: 150 ppm at 15 percent O ₂ or 1,100 ng/J of useful output (8.7 lb/MWh) for turbines located north of the Arctic Circle.	Yes	MR&R methods in accordance with Conditions 49.1 through 49.4.

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

AQ0923TVP02 – Condition 50	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & 60.4330(a)(2)	NSPS Subpart KKKK SO ₂ Standard	Do not burn any fuel which contains total potential sulfur emissions in excess of 26 ng SO ₂ /J (0.060 lb SO ₂ /MMBtu) heat input.	Yes	MR&R methods in accordance with Conditions 51.1 through 51.4.
AQ0923TVP02 – Condition 79	18 AAC 50.235, 50.326(j), 50.040(j)(4); 40 CFR 71.6(c)(6)	Technology-Based Emission Standard	If an unavoidable emergency, malfunction (as defined in 18 AAC 50.235(d)), or non-routine repair (as defined in 18 AAC 50.990(64)), causes emissions in excess of a technology-based emission standard listed in Conditions 41, 42, 48, 50, and 64 the Permittee shall the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.	Yes	MR&R methods in accordance with Conditions 79.1, 79.2, and 94.1b.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subpart GG Standards of Performance for Stationary Combustion Turbines	Per 40 CFR 60.4305(b), stationary combustion turbines regulated under 40 CFR Subpart KKKK are exempt from the requirements of Subpart GG.
40 CFR 60 Subpart KKKK Standards of Performance for Stationary Combustion Turbines 40 CFR 60.4325	EU IDs 1, 2, and 33 cannot burn both natural gas and distillate oil (or some other combination of fuels).
40 CFR 60 Subpart KKKK Standards of Performance for Stationary Combustion Turbines 40 CFR 60.4335, 60.4355	EU IDs 1, 2, and 33 do not use water or steam injection.
40 CFR 60 Subpart KKKK Standards of Performance for Stationary Combustion Turbines 40 CFR 60.4340(b), 60.4345, 60.4350, 60.4405, 60.4410	CEMS or continuous parameter monitoring is not used to monitor compliance
40 CFR 60 Subpart KKKK Standards of Performance for Stationary Combustion Turbines 40 CFR 60.4390	EU IDs 1, 2, and 33 are not emergency combustion turbines or research and development turbines.
40 CFR 63 Subpart YYYY National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines	The stationary source is not a major source of hazardous air pollutants.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	3 / Base
2.	Date installation/construction commenced ¹	2009
3.	Date installed	December 2010
4.	Emission Unit serial number	5272003454
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Detroit Diesel T1638A36
7.	Type of combustion device	Standby Reciprocating Engine
8.	Rated design capacity (horsepower rating for engines)	3,351 bhp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	NA
10.	If used for power generation, electrical output (kW)	2,500 kW

- ¹. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 147 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: None.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance ?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0932TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitoring, recordkeeping, and reporting (MR&R) in accordance with Conditions 1.4, and 2 through 4.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3), & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. MR&R in accordance with Conditions 7.4, and 8 through 10.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R in accordance with Conditions 15.1 and 27.2.
AQ0923TVP02 – Condition 20.3 and 20.3b	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1); pConditions 6 & 7, Minor Permit AQ0923MSS11	Emissions and Fuel Control Settings and Stacks	Provide the revised settings and the reason for the revision in the operating report submitted under Condition 95 for that reporting period, if the Permittee makes changes to: the emission and fuel control settings on any of the engines	Yes	MR&R in accordance with Conditions 20.3 and 20.3b.
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance ?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
	AQ0923MSS11				
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR. 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review.
AQ0923TVP02 – Condition 26.1	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Conditions 18.1, 22.1(a) – (c) & (e), and Table 6, Minor Permit AQ0923MSS11	NO ₂ and SO ₂ Ambient Air Quality Protection	Limit operations to no more than 2,000 hour/year.	Yes	MR&R as required by Condition 26.1a through 26.1e.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance ?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 36	18 AAC 50.040(a)(1); 40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 41, 42, 48, and 50, nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether the emission unit would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	N/A	N/A – Advisory Provision
AQ0923TVP02 – Condition 37	18 AAC 50.040(a)(1); 40 CFR 60.12	NSPS Subpart A Concealment of Emissions	The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard.	Yes	Reasonable Inquiry
AQ0923TVP02 – Conditions 39 and 39.1	18 AAC 50.040(a)(2)(OO) & (j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & 40 CFR 60.4200(a)(2)(i) & (e), 60.4218 & Table 8, Subpart IIII	NSPS Subpart IIII Requirements	Comply with applicable requirements of 40 CFR 60 Subpart IIII for stationary compression internal combustion engines whose construction, modification, or reconstruction commenced after July 11, 2005.	Yes	MR&R in accordance with Conditions 40 through 44.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance ?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 40	40 CFR. 60.4206 & 60.4211(a)	NSPS Subpart IIII GAPCP	Except as permitted under Condition 40.1. Operate and maintain control device according to the manufacturer's written instructions and meet the applicable emissions standards over the entire life of the engine. In addition, the Permittee may only change those settings that are permitted by the manufacturer.	Yes	Record Review
AQ0932TVP02 – Condition 41.1	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 60.4207(b) &, 80.510 (b)	NSPS Subpart IIII Fuel Requirements	Burn only ULSD fuel that meets the requirements of 40 CFR 80.510(b) for non-road diesel fuel.	Yes	MR&R methods in accordance with Conditions 27.2, 43.3, and 44.
AQ0932TVP02 – Conditions 42 and 42.1	40 CFR 60.4204(b) & 60.4205(b), & Table 1, Subpart IIII	NSPS Subpart IIII Emission Standards	Comply with the emission standards of 42.1 a through d.	Yes	Monitor and record as required by Condition 43.2.
AQ0923TVP02 – Condition 53	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 63.6590(c)(1)	NESHAP Subpart ZZZZ Applicability	Comply with the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart IIII.	Yes	MR&R methods in accordance with Conditions 39 through 45.
AQ0923TVP02 – Condition 79	18 AAC 50.235(a), 50.326(j)(4), 50.040(j)(4); 40 CFR 71.6(c)(6)	Technology-Based Emission Standard	If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.23(d), causes emissions in excess of a technology-based emission standard listed in Conditions 41, 42, 48, 50, and	Yes	MR&R methods in accordance with Conditions 79.1, 79.2, and 94.1b.

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance ?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
			64 the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.		

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	14 through 17 / Base
2.	Date installation/construction commenced ¹	Unknown
3.	Date installed	Unknown
4.	Emission Unit serial number	Unknown
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Caterpillar D399
7.	Type of combustion device	Engine
8.	Rated design capacity (horsepower rating for engines)	1,128 bhp, each
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	NA
10.	If used for power generation, electrical output (kW)	NA

- ¹. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 65.8 gallons/hr, each

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: NA

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 18.1	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1); Condition 3, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	In all situations, operate the actual drilling rig with equipment that does not exceed the cumulative engine rating of 5,400 bhp.	Yes	Monitoring, recordkeeping, and reporting (MR&R) as required by Condition 20.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a) Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 18.1b.	Yes	MR&R as required by Condition 20.

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
18 AAC 50.055	These engines are nonroad engines and are not subject to the Alaska SIP emissions standards.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	18 / Base
2.	Date installation/construction commenced ¹	Unknown
3.	Date installed	Unknown
4.	Emission Unit serial number	E6M02893
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Caterpillar D353
7.	Type of combustion device	Engine
8.	Rated design capacity (horsepower rating for engines)	233 bhp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	NA
10.	If used for power generation, electrical output (kW)	NA

- ^{1.} See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 13.5 gallons/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: NA

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 18.1	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) Condition 3, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	In all situations, operate the actual drilling rig with equipment that does not exceed the cumulative engine rating of 5,400 bhp.	Yes	Monitoring, recordkeeping, and reporting (MR&R) as required by Condition 20.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 18.1b.	Yes	MR&R as required by Condition 20.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19 Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
18 AAC 50.055	These engines are nonroad engines and are not subject to the SIP emission standards.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	19 / Base
2.	Date installation/construction commenced ¹	Unknown
3.	Date installed	Unknown
4.	Emission Unit serial number	Unknown
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Peak
7.	Type of combustion device	Crane Engine
8.	Rated design capacity (horsepower rating for engines)	650 bhp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

- ^{1.} See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 33.2 gallons/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 19	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1); Condition 4, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	Operate actual Workover Rigs similar or smaller than the Workover Rig presented as EU IDs 19 through 24 in Table A; In all situations, operate engines with cumulative rating not exceeding 1,225 bHp.	Yes	Monitoring, recordkeeping, and reporting (MR&R) as required by Condition 20.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 19.2.	Yes	MR&R as required by Condition 20.

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

AQ0923TVP02 – Condition 26.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 18.2, Minor Permit AQ0923MSS11	NO ₂ and SO ₂ Ambient Air Quality Protection	Limit operation of the Workover Rig to 55 days per consecutive 12-month period.	Yes	MR&R as required by Conditions 26.2a through 26.2d.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
18 AAC 50.055	These engines are nonroad/mobile engines and are not subject to the SIP emissions standards.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	20 / Base
2.	Date installation/construction commenced ¹	Unknown
3.	Date installed	Unknown
4.	Emission Unit serial number	Unknown
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Manitowoc
7.	Type of combustion device	Crane Engine
8.	Rated design capacity (horsepower rating for engines)	575 bhp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

- ^{1.} See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 29.4 gallons/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 19	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1); Condition 4, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	Operate actual Workover Rigs similar or smaller than the Workover Rig presented as EU IDs 19 through 24 in Table A; In all situations, operate the actual workover rig with equipment that does not exceed the cumulative engine rating of 1,225 bhp.	Yes	Monitoring, recordkeeping, and reporting (MR&R) as required by Condition 20.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 19.2.	Yes	MR&R as required by Condition 20.
AQ0923TVP02 – Condition 26.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a) Condition 18.2, Minor Permit AQ0923MSS11	NO ₂ and SO ₂ Ambient Air Quality Protection	Limit operation of the Workover Rig to 55 days per consecutive 12-month period.	Yes	MR&R as required by Conditions 26.2a through 26.2d.

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
18 AAC 50.055	These engines are nonroad/mobile engines and are not subject to the SIP emissions standards.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	32 / Base
2.	Date installation/construction commenced ¹	2010
3.	Date installed	2010
4.	Emission Unit serial number	23877-01
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Solar Taurus 70
7.	Type of combustion device	Dual Fuel Turbine
8.	Rated design capacity (horsepower rating for engines)	N/A
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	Approximately 88.5 MMBtu/hr (fuel gas) / 82.6 MMBtu/hr (diesel)
10.	If used for power generation, electrical output (kW)	8,250 kW (fuel gas) / 7,700 kW (diesel)

- ^{1.} See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Natural Gas	Approximately 82.6 Mscf/hr
Diesel	Approximately 646 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Visible emissions may not reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Conditions VIII and IX. Monitoring, recordkeeping, and reporting (MR&R) in accordance with Conditions 1.5 and/or 14.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. MR&R in accordance with Condition 7.6 and 1.5.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R in accordance with Conditions 15.1 and 27.
AQ0923TVP02 – Condition 20.3 and 20.3a	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1); Conditions 6 & 7, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements – Emissions and Fuel Control Settings and Stacks	The Permittee shall provide the revised settings and the reason for the revision in the operating report submitted under Condition 95 for that reporting period, if the Permittee makes changes to the emission and fuel control settings and stacks of the turbines, EU IDs 1, 2, 32, and 33.	Yes	Reporting in accordance with Conditions 20.3 and 20.3a.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.
AQ0923TVP02 – Condition 22	18 AAC 50.040(j)(4) & 50.326(j)(4); 40 CFR 71.6(a)(3) & (c)(6)	Verification of Turbine Emission Factors	Conduct a winter performance test on one of EUs 1, 2, 32, or 33 to verify CO and NO _x emission factors.	Yes	MR&R as required by Conditions 22.1 through 22.4.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record Review
AQ0923TVP02 – Condition 26.1	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Conditions 18.1, 22.1(a) – (c) & (e), and Table 6, Minor Permit AQ0923MSS11	NO ₂ and SO ₂ Ambient Air Quality Protection	Limit the operation on diesel to no more than 600 hr/yr.	Yes	MR&R as required by Conditions 26.1a through 26.1e.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 27.1	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	While burning natural gas, burn only natural gas with a hydrogen sulfide content that does not exceed 250 ppmv (on an instantaneous basis at standard conditions).	Yes	MR&R as required by Conditions 27.1a through 27.1d.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	While burning diesel fuel, burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 28	18 AAC 50.040(j)(4) & 50.326(j)(3); 40 CFR 71.6(a)(1) & (3); Condition 22.1(d), Minor Permit AQ0923MSS11	Source Testing Requirements When Operating on ULSD	Conduct source testing if the 12 month rolling total operating hours on ULSD exceed the limit of 600 hours per consecutive 12 months.	Yes	MR&R as required by Conditions 28.1 through 28.4.
AQ0923TVP02 – Condition 31	18 AAC 50.040(a)(1); 40 CFR 60.7(b)	NSPS Subpart A Startup, Shutdown, and Malfunction Requirements	Maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of the emission unit and malfunctions of associated air-pollution control equipment.	Yes	Recordkeeping in accordance with Condition 31.
AQ0923TVP02 – Condition 32	18 AAC 50.040(a)(1); 40 CFR 60.7(c) & 60.4375(a)	NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report	Submit Excess Emission and Monitoring Systems Performance (EEMSP) reports as specified in this Condition.	Yes	MR&R as required by Conditions 32.1 through 32.4.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 33	18 AAC 50.040(a)(1); 40 CFR 60.7(c) & (d)	NSPS Subpart A Summary Report Form	Submit to ADEC and EPA semiannually a “summary report form” as specified in this Condition.	Yes	MR&R as required by Conditions 33, 33.1 and 33.2.
AQ0923TVP02 – Condition 36	18 AAC 50.040(a)(1); 40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 41, 42, 48, and 50, nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether the emission unit would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	N/A	N/A – Advisory Provision
AQ0923TVP02 – Condition 37	18 AAC 50.040(a)(1); 40 CFR 60.12	NSPS Subpart A Concealment of Emissions	The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard.	Yes	Reasonable Inquiry
AQ0923TVP02 – Condition 46	18 AAC 50.040(a)(2)(QQ) & (j)(4) & 50.326(j); 40 CFR 71.6(a)(1) , & 60.4305(a)	NSPS Subpart KKKK Applicability	For EU IDs 1, 2, 32, and 33 listed in Table A, the Permittee shall comply with the applicable requirements for stationary combustion turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005.	Yes	Record Review

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Conditions 47 and 47.1	18 AAC 50.040(a)(2)(QQ) & (j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & 60.4333(a) & (b)	NSPS Subpart KKKK GAPCP and General Requirements	Operate and maintain air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.	Yes	Reasonable Inquiry / Record Review
AQ0923TVP02 – Condition 47.2	18 AAC 50.040(a)(2)(QQ) & (j)(4) and 50.326(j); 40 CFR 71.6(a)(1) & 60.4333(a) & (b)	NSPS Subpart KKKK GAPCP and General Requirements	When any of EU IDs 1, 2, 32, and 33 is equipped with heat recovery system and utilizes a common steam header with one or more combustion turbines, the Permittee shall either: a. Determine compliance with the NO _x emissions limit in Condition 48 by measuring the emissions combined with the emissions from the other unit(s) utilizing the common heat recovery unit; or b. Develop, demonstrate, and provide information satisfactory to the Administrator on methods for apportioning the combined gross energy output from the heat recovery unit for each of the affected combustion turbines. The Administrator may approve such demonstrated substitute methods for apportioning the combined gross energy output measured at the steam turbine whenever the demonstration ensures accurate estimation of emissions related under this part.	Yes	Reasonable Inquiry / Record Review
AQ0923TVP02 – Condition 48	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1), 60.4320(a), 60.4325 & Table 1 of Subpart KKKK	NSPS Subpart KKKK NO _x Standard	The Permittee shall meet the NO _x emission limit of: 150 ppm at 15 percent O ₂ or 1,100 ng/J of useful output (8.7 lb/MWh) for turbines located north of the Arctic Circle.	Yes	MR&R as required by Conditions 49.1 through 49.4.

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

AQ0923TVP02 – Condition 50	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & 60.4330(a)(2)	NSPS Subpart K K K K SO ₂ Standard	Do not burn any fuel which contains total potential sulfur emissions in excess of 26 ng SO ₂ /J (0.060 lb SO ₂ /MMBtu) heat input.	Yes	MR&R as required by Conditions 51.1 through 51.4.
AQ0923TVP02 – Condition 79	18 AAC 50.235, 50.326(j) & 50.040(j)(4); 40 CFR 71.6(c)(6)	Technology- Based Emission Standard	If an unavoidable emergency, malfunction (as defined in 18 AAC 50.235(d)), or non-routine repair (as defined in 18 AAC 50.990(64)), causes emissions in excess of a technology- based emission standard listed in Conditions 41, 42, 48, 50, and 64 the Permittee shall the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.	Yes	MR&R methods in accordance with Conditions 79.1, 79.2, and 94.1b.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subpart GG Standards of Performance for Stationary Combustion Turbines	Per 40 CFR 60.4305(b), stationary combustion turbines regulated under 40 CFR Subpart KKKK are exempt from the requirements of Subpart GG.
40 CFR 60 Subpart KKKK Standards of Performance for Stationary Combustion Turbines 40 CFR 60.4335, 60.4355	EU ID 32 does not use water or steam injection.
40 CFR 60 Subpart KKKK Standards of Performance for Stationary Combustion Turbines 40 CFR 60.4340(b), 60.4345, 60.4350, 60.4405, 60.4410	CEMS or continuous parameter monitoring is not used to monitor compliance
40 CFR 60 Subpart KKKK Standards of Performance for Stationary Combustion Turbines 40 CFR 60.4390	EU ID 32 is not an emergency combustion turbine or research and development turbine.
40 CFR 63 Subpart YYYY National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines	The stationary source is not a major source of hazardous air pollutants.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	47 / Base
2.	Date installation/construction commenced ¹	2010
3.	Date installed	April 2012
4.	Emission Unit serial number	MHB00342
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	MTU 16V 4000 G83 (T1638A36)
7.	Type of combustion device	Engine
8.	Rated design capacity (horsepower rating for engines)	3,351 bhp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	2,500 kW

- ¹. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 171.2 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0932TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitoring, recordkeeping, and reporting (MR&R) in accordance with Conditions 1.4, and 2 through 4.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition MR&R in accordance with Conditions 7.4, and 8 through 10.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R in accordance with Conditions 15.1 and 27.2.
AQ0923TVP02 – Conditions 20.3 and 20.3b	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1); Conditions 6 & 7, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements – Emissions and Fuel Control Settings and Stacks	Provide the revised settings and the reason for the revision in the operating report submitted under Condition 95 for that reporting period, if the Permittee makes changes to: the emission and fuel control settings on any of the engines.	Yes	MR&R in accordance with Conditions 20.3 and 20.3b.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 36	18 AAC 50.040(a)(1); 40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 41, 42, 48, and 50, nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether the emission unit would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	N/A	N/A – Advisory Provision

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 37	18 AAC 50.040(a)(1); 40 CFR 60.12	NSPS Subpart A Concealment of Emissions	The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard.	Yes	Reasonable Inquiry
AQ0923TVP02 – Conditions 39 and 39.1	18 AAC 50.040(a)(2)(OO), 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1), 60.4200(a)(2)(i) & (e), 60.4218 & Table 8, Subpart IIII	NSPS Subpart IIII Requirements	Comply with applicable requirements of 40 CFR 60 Subpart IIII for stationary compression internal combustion engines whose construction, modification, or reconstruction commenced after July 11, 2005.	Yes	MR&R in accordance with Conditions 40 through 44.
AQ0923TVP02 – Condition 40	40 CFR 60.4206 & 60.4211(a)	NSPS Subpart IIII GAPCP	Except as permitted under Condition 40.1. Operate and maintain control device according to the manufacturer's written instructions and meet the applicable emissions standards over the entire life of the engine. In addition, the Permittee may only change those settings that are permitted by the manufacturer.	Yes	Record Review
AQ0923TVP02 – Condition 41.2	18 AAC 50.040(a)(2)(OO) & (j) & 50.326(j); 40 CFR 71.6(a)(1) & 60.4216(f)	NSPS Subpart IIII Fuel Requirements	May use fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel.	Yes	MR&R as required by Conditions 43.4a through 43.4b and 44.
AQ0932TVP02 – Conditions 42 and 42.1	40 CFR 60.4204(b) & 60.4205(b), & Table 1, Subpart IIII	NSPS Subpart IIII Emission Standards	Comply with the emission standards of 42.1a through 42.1d.	Yes	Monitor and record as required by Condition 43.2.
AQ0923TVP02 – Condition 53	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 63.6590(c)(1)	NESHAP Subpart ZZZZ Applicability	Comply with the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart IIII.	Yes	MR&R methods in accordance with Conditions 39 through 45.

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

AQ0923TVP02 – Condition 79	18 AAC 50.235(a), 50.326(j)(4) & 50.040(j)(4); 40 CFR 71.6(c)(6)	Technology-Based Emission Standard	If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.23(d), causes emissions in excess of a technology-based emission standard listed in Conditions 41, 42, 48, 50, and 64 the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.	Yes	MR&R methods in accordance with Conditions 79.1, 79.2, and 94.1b.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	49 / Base
2.	Date installation/construction commenced ¹	2006
3.	Date installed	October 14, 2011
4.	Emission Unit serial number	SBK01163
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Caterpillar 3516C
7.	Type of combustion device	Engine
8.	Rated design capacity (horsepower rating for engines)	3,635 bhp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	2,250 ekW

- ^{1.} See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 185.7 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0932TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitoring, recordkeeping, and reporting (MR&R) in accordance with Conditions 1.4, and 2 through 4.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. MR&R in accordance with Conditions 7.4, and 8 through 10.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R in accordance with Conditions 15.1 and 27.2.
AQ0923TVP02 – Conditions 20.3 and 20.3b	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1); Conditions 6 & 7, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements – Emissions and Fuel Control Settings and Stacks	Provide the revised settings and the reason for the revision in the operating report submitted under Condition 95 for that reporting period, if the Permittee makes changes to: the emission and fuel control settings on any of the engines.	Yes	MR&R in accordance with Conditions 20.3 and 20.3b.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review
AQ0923TVP02 – Condition 26.1	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Conditions 18. 1, 22.1(a) – (c) & (e), and Table 6, Minor Permit AQ0923MSS11	NO ₂ and SO ₂ Ambient Air Quality Protection	Limit operations to no more than 2,000 hour/year.	Yes	MR&R as required by Conditions 26.1a through 26.1e.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 36	18 AAC 50.040(a)(1); 40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 41, 42, 48, and 50, nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether the emission unit would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	N/A	N/A – Advisory Provision
AQ0923TVP02 – Condition 37	18 AAC 50.040(a)(1); 40 CFR 60.12	NSPS Subpart A Concealment of Emissions	The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard.	Yes	Reasonable Inquiry
AQ0923TVP02 – Conditions 39 and 39.1	18 AAC 50.040(a)(2)(OO), 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1), 60.4200(a)(2)(i) & (e), 60.4218 & Table 8, Subpart IIII	NSPS Subpart IIII Requirements	Comply with applicable requirements of 40 CFR 60 Subpart IIII for stationary compression internal combustion engines whose construction, modification, or reconstruction commenced after July 11, 2005.	Yes	MR&R in accordance with Conditions 40 through 44.
AQ0923TVP02 – Condition 40	40 CFR 60.4206 & 60.4211(a)	NSPS Subpart IIII GAPCP	Except as permitted under Condition 40.1. Operate and maintain control device according to the manufacturer's written instructions and meet the applicable emissions standards over the entire life of the engine. In addition, the Permittee may only change those settings that are permitted by the manufacturer.	Yes	Record Review

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 41.2	18 AAC 50.040(a)(2)(OO) & (j) & 50.326(j); 40 CFR 71.6(a)(1) & 60.4216(f)	NSPS Subpart IIII Fuel Requirements	May use fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel.	Yes	MR&R as required by Conditions 43.4a through 43.4b and 44.
AQ0932TVP02 – Conditions 42 and 42.1	40 CFR 60.4204(b) & 60.4205(b), & Table 1, Subpart IIII	NSPS Subpart IIII Emission Standards	Comply with the emission standards of Conditions 42.1a through 42.1d.	Yes	Monitor and record as required by Conditions 43.1 and 43.2.
AQ0923TVP02 – Condition 53	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 63.6590(c)(1)	NESHAP Subpart ZZZZ Applicability	Comply with the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart IIII.	Yes	MR&R methods in accordance with Conditions 39 through 45.
AQ0923TVP02 – Condition 79	18 AAC 50.235(a), 50.326(j)(4) & 50.040(j)(4); 40 CFR 71.6(c)(6)	Technology-Based Emission Standard	If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.23(d), causes emissions in excess of a technology-based emission standard listed in Conditions 41, 42, 48, 50, and 64 the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.	Yes	MR&R methods in accordance with Conditions 79.1, 79.2, and 94.1b.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	50 / Base
2.	Date installation/construction commenced ¹	2010
3.	Date installed	2011
4.	Emission Unit serial number	PE6068L154228
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	John Deere 6068HFC28C
7.	Type of combustion device	Engine
8.	Rated design capacity (horsepower rating for engines)	183 bhp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

- ^{1.} See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 9.4 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Visible emissions may not reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. For emissions units that are significant per 18 AAC 50.326(d)(1) but are otherwise insignificant based on historical actual emissions per 18 AAC 50.326(e)), as long as the emissions units do not exceed the corresponding operational limits in Table C and Condition 26.2, monitoring shall consist of an annual compliance Certification. Otherwise monitor, record, and report (MR&R) as required by Conditions 2 through 4.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Particulate matter emissions may not exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. For emissions units that are significant per 18 AAC 50.326(d)(1) but are otherwise insignificant based on historical actual emissions per 18 AAC 50.326(e)), as long as the emissions units do not exceed the corresponding operational limits in Table C and Condition 26.2, monitoring shall consist of an annual compliance certification under Condition 96 for the PM emissions standard based on reasonable inquiry. Otherwise, MR&R in accordance with Conditions 7.3 and 8 through 10.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	Sulfur compound emissions may not exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. Monitor, record, and report as required by Conditions 15.1 and 27.2.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Conditions 20.3 and 20.3b	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1); Conditions 6 & 7, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements – Emissions and Fuel Control Settings and Stacks	Provide the revised settings and the reason for the revision in the operating report submitted under Condition 95 for that reporting period, if the Permittee makes changes to: the emission and fuel control settings on any of the engines.	Yes	MR&R in accordance with Conditions 20.3 and 20.3b.
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS1	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review.
AQ0923TVP02 – Condition 26.1	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Conditions 18. 1, 22.1(a) – (c) & (e), and Table 6, Minor Permit AQ0923MSS11	NO ₂ and SO ₂ Ambient Air Quality Protection	Limit operations to no more than 100 hour/year.	Yes	MR&R as required by Conditions 26.1a through 26.1e.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 36	18 AAC 50.040(a)(1); 40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 41, 42, 48, and 50, nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether the emission unit would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	N/A	N/A – Advisory Provision
AQ0923TVP02 – Condition 37	18 AAC 50.040(a)(1); 40 CFR 60.12	NSPS Subpart A Concealment of Emissions	The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard.	Yes	Reasonable Inquiry
AQ0923TVP02 – Conditions 39 and 39.1	18 AAC 50.040(a)(2)(OO), 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1), 60.4200(a)(2)(i) & (e), 60.4218 & Table 8, Subpart IIII	NSPS Subpart IIII Requirements	Comply with applicable requirements of 40 CFR 60 Subpart IIII for stationary compression internal combustion engines whose construction, modification, or reconstruction commenced after July 11, 2005.	Yes	MR&R in accordance with Conditions 40 through 44.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 40	40 CFR 60.4206 & 60.4211(a)	NSPS Subpart IIII GAPCP	Except as permitted under Condition 40.1. Operate and maintain control device according to the manufacturer's written instructions and meet the applicable emissions standards over the entire life of the engine. In addition, the Permittee may only change those settings that are permitted by the manufacturer.	Yes	Record Review
AQ0923TVP02 – Condition 41.2	18 AAC 50.040(a)(2)(OO) & (j) & 50.326(j); 40 CFR 71.6(a)(1) & 60.4216(f)	NSPS Subpart IIII Fuel Requirements	May use fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel.	Yes	MR&R as required by Conditions 43.4a through 43.4b and 44.
AQ0923TVP02 – Conditions 42 and 42.5	40 CFR 60.4205(c) & Table 4, Subpart IIII	NSPS Subpart IIII Emission Standards	Comply with the exhaust emission standards of 42.5a and 42.5b.	Yes	MR&R as required by Conditions 43.2 and 44.
AQ0923TVP02 – Condition 43.5	40 CFR 60.4209(a) & 60.4211(f)(1) – (3)	NSPS Subpart IIII Requirements for emergency CI ICE	Comply with the requirements for emergency stationary CI ICE under Subpart IIII.	Yes	MR&R as required by Conditions 43.5a, 43.5b, 43.6 and 44.
AQ0923TVP02 – Condition 53	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 63.6590(c)(1)	NESHAP Subpart ZZZZ Applicability	Comply with the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart IIII.	Yes	MR&R methods in accordance with Conditions 39 through 45.
AQ0923TVP02 – Condition 79	18 AAC 50.235(a), 50.326(j)(4) & 50.040(j)(4); 40 CFR 71.6(c)(6)	Technology-Based Emission Standard	If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.23(d), causes emissions in excess of a technology-based emission standard listed in Conditions 41, 42, 48, 50, and 64 the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.	Yes	MR&R methods in accordance with Conditions 79.1, 79.2, and 94.1b.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	64 / Base
2.	Date installation/construction commenced ¹	March 2010
3.	Date installed	2011
4.	Emission Unit serial number	RG6090L078257
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	John Deere 6090HF485
7.	Type of combustion device	Engine
8.	Rated design capacity (horsepower rating for engines)	422 bhp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

- ^{1.} See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 21.6 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0932TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitoring, recordkeeping, and reporting (MR&R) under Condition 1.3, such that it reads: For EU ID 64 (an emission unit that is significant per 18 AAC 50.326(d)(1) but is otherwise insignificant based on historical actual emissions per 18 AAC 50.326(e)) listed in Table A, as long as actual emissions from the emission unit are less than the significant emissions thresholds listed in 18 AAC 50.326(e) during any consecutive 12-month period, monitoring shall consist of an annual compliance certification under Condition 96 with the visible emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 95 if EU ID 64 reaches any of the significant emissions thresholds listed in 18 AAC 50.326(e) and monitor, record, and report in accordance with Conditions 2 through 4 for the remainder of the permit term for that emissions unit.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	MR&R under Condition 7.3, such that it reads: For EU ID 64 (an emission unit that is significant per 18 AAC 50.326(d)(1) but is otherwise insignificant based on historical actual emissions per 18 AAC 50.326(e)) listed in Table A, as long as actual emissions from the emission unit are less than the significant emissions thresholds listed in 18 AAC 50.326(e) during any consecutive 12-month period, monitoring shall consist of an annual compliance certification under Condition 96 with the PM emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 95 if EU ID 64 reaches any of the significant emissions thresholds listed in 18 AAC 50.326(e) and monitor, record, and report in accordance with Conditions 8 through 10 for the remainder of the permit term for that emissions unit.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R in accordance with Conditions 15.1 and 27.2.
AQ0923TVP02 – Conditions 20.3 and 20.3b	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1); Conditions 6 & 7, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements – Emissions and Fuel Control Settings and Stacks	Provide the revised settings and the reason for the revision in the operating report submitted under Condition 95 for that reporting period, if the Permittee makes changes to: the emission and fuel control settings on any of the engines	Yes	MR&R in accordance with Conditions 20.3 and 20.3b.

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 36	18 AAC 50.040(a)(1); 40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 41, 42, 48, and 50, nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether the emission unit would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	N/A	N/A – Advisory Provision
AQ0923TVP02 – Condition 37	18 AAC 50.040(a)(1); 40 CFR 60.12	NSPS Subpart A Concealment of Emissions	The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard.	Yes	Reasonable Inquiry
AQ0923TVP02 – Conditions 39 and 39.1	18 AAC 50.040(a)(2)(OO), 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1), 60.4200(a)(2)(i) & (e), 60.4218 & Table 8, Subpart IIII	NSPS Subpart IIII Requirements	Comply with applicable requirements of 40 CFR 60 Subpart IIII for stationary compression internal combustion engines whose construction, modification, or reconstruction commenced after July 11, 2005.	Yes	MR&R in accordance with Conditions 40 through 44.
AQ0923TVP02 – Condition 40	40 CFR 60.4206 & 60.4211(a)	NSPS Subpart IIII GAPCP	Except as permitted under Condition 40.1. Operate and maintain control device according to the manufacturer's written instructions and meet the applicable emissions standards over the entire life of the engine. In addition, the Permittee may only change those settings that are permitted by the manufacturer.	Yes	Record Review

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 41.2	18 AAC 50.040(a)(2)(OO) & (j) & 50.326(j); 40 CFR 71.6(a)(1) & 60.4216(f)	NSPS Subpart IIII Fuel Requirements	May use fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel.	Yes	MR&R as required by Conditions 43.4a through 43.4b and 44.
AQ0932TVP02 – Conditions 42 and 42.2	40 CFR 60.4204(b) & 60.4205(b), & Table 1, Subpart IIII	NSPS Subpart IIII Emission Standards	Comply with the emission standards of Conditions 42.2a through 42.2c and 42.4a through 42.1c.	Yes	Monitor and record as required by Condition 43.2.
AQ0923TVP02 – Condition 53	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 63.6590(c)(1)	NESHAP Subpart ZZZZ Applicability	Comply with the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart IIII.	Yes	MR&R methods in accordance with Conditions 39 through 45.
AQ0923TVP02 – Condition 79	18 AAC 50.235(a), 50.326(j)(4) & 50.040(j)(4); 40 CFR 71.6(c)(6)	Technology-Based Emission Standard	If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.23(d), causes emissions in excess of a technology-based emission standard listed in Conditions 41, 42, 48, 50, and 64 the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.	Yes	MR&R methods in accordance with Conditions 79.1, 79.2, and 94.1b.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	68, 116 // Base
2.	Date installation/construction commenced ¹	1980
3.	Date installed	September 2011
4.	Emission Unit serial number	8FV4919, 8FV4791
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Detroit Diesel 8V-71N
7.	Type of combustion device	Engine
8.	Rated design capacity (horsepower rating for engines)	320 bhp, each
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	239 kW, each

- ^{1.} See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 16.4 gal/hr, each

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0932TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Monitoring, recordkeeping, and reporting (MR&R) under Condition 1.3, such that it reads: For each of EU IDs 68 and 116 (emissions units that are significant per 18 AAC 50.326(d)(1) but are otherwise insignificant based on historical actual emissions per 18 AAC 50.326(e)) listed in Table A, as long as actual emissions from the emissions unit are less than the significant emissions thresholds listed in 18 AAC 50.326(e) during any consecutive 12-month period, monitoring shall consist of an annual compliance certification under Condition 96 with the visible emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 95 if any of EU IDs 68 and/or 116 reaches any of the significant emissions thresholds listed in 18 AAC 50.326(e) and monitor, record, and report in accordance with Conditions 2 through 4 for the remainder of the permit term for that emissions unit.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	MR&R under Condition 7.3, such that it reads: For each of EU IDs 68 and 116 (emissions units that are significant per 18 AAC 50.326(d)(1) but are otherwise insignificant based on historical actual emissions per 18 AAC 50.326(e)) listed in Table A, as long as actual emissions from the emissions unit are less than the significant emissions thresholds listed in 18 AAC 50.326(e) during any consecutive 12-month period, monitoring shall consist of an annual compliance certification under Condition 96 with the PM emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 95 if any of EU IDs 68 and/or 116 reaches any of the significant emissions thresholds listed in 18 AAC 50.326(e) and monitor, record, and report in accordance with Conditions 8 through 10 for the remainder of the permit term for that emissions unit.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. Monitor, record, and report (MR&R) in accordance with Conditions 15.1 and 27.2.
AQ0923TVP02 – Conditions 20.3 and 20.3b	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) Conditions 6 & 7, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements – Emissions and Fuel Control Settings and Stacks	Provide the revised settings and the reason for the revision in the operating report submitted under Condition 95 for that reporting period, if the Permittee makes changes to: the emission and fuel control settings on any of the engines	Yes	MR&R in accordance with Conditions 20.3 and 20.3b.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Conditions 52 and 52.1	18 AAC 50.040(c)(1), (23), & (35), 50.040(j)(4), & 50.326(j); 40 CFR 71.6(a)(1) & 63.1-63.15	NESHAP Subpart A Applicability	The Permittee shall comply with the applicable requirements of 40 CFR 63 Subpart A in accordance with the provisions for applicability of Subpart A in Table 8 to Subpart ZZZZ.	Yes	MR&R in accordance with Condition 52.1.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 53	18 AAC 50.040(c)(23), 50.040(j)(4), & 50.326(j); 40 CFR 71.6(a)(1), 63.6585(c), 63.6590(a)(1)(iii), (a)(2)(iii) & (c)(i), & 63.6605(a)	NESHAP Subpart ZZZZ Applicability	Comply with the requirements of 40 CFR 63 Subpart ZZZZ by complying with Condition 54 through 57.	Yes	MR&R in accordance with Conditions 54 through 57.
AQ0923TVP02 – Condition 54	18 AAC 50.040(c)(23), (j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3)(i) & 63.6605(b)	NESHAPs Subpart ZZZZ GAPCP, Operation and Maintenance Requirements	The Permittee shall at all times operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.	Yes	MR&R in accordance with Conditions 54.2 and 54.3.
AQ0923TVP02 – Condition 55	18 AAC 50.040 (c)(23) & (j)(4), & 50.326(j); 40 CFR 71.6(a)(1) & (3)(i), 63.6603(b), 63.6625(i), 63.6640(a), 63.6660 & Table 2d	NESHAP Subpart ZZZZ Work and Management Practices Standards	Unit must meet the management practices that are shown for stationary non-emergency CI RICE less than or equal to 300 HP in Table 2d.	Yes	MR&R as required by Conditions 55.1 through 55.4, 56 and 57.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subpart IIII	These engines are not firewater pumps and were manufactured before April 2, 2006.
40 CFR 63 Subpart ZZZZ §§63.6600, 63.6601, 63.6602, 63.6610, 63.6611	Stationary source is not a major source of hazardous air pollutants. These emissions units are not 4SLB engines.
40 CFR 63 Subpart ZZZZ §§63.6612, 63.6615, 63.6620, 63.6625, 63.6630, 63.6635, 63.6640	These engines are not accessible by Federal Aid Highway System and is not subject to a numerical emission standard or operating limitation.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	74, 75 / Base
2.	Date installation/construction commenced ¹	N/A
3.	Date installed	N/A
4.	Emission Unit serial number	N/A
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Cummins
7.	Type of combustion device	Engine
8.	Rated design capacity (horsepower rating for engines)	303 bhp, each
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

- ^{1.} See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 15.5 gal/hr, each

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 18.1	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) Condition 3 Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	In all situations, operate the actual drilling rig with equipment that does not exceed the cumulative engine rating of 5,400 bhp.	Yes	Monitoring, recordkeeping, and reporting (MR&R) as required by Condition 20.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 18.1b	Yes	MR&R as required by Condition 20.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
18 AAC 50.055	These engines are nonroad engines and are not subject to the SIP emission standards.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	78 // Base
2.	Date installation/construction commenced ¹	Unknown; Rotate on/off site
3.	Date installed	Unknown; Rotate on/off site
4.	Emission Unit serial number	Unknown
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Caterpillar 3616C
7.	Type of combustion device	Engine
8.	Rated design capacity (horsepower rating for engines)	2,763 bhp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

- ^{1.} See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 141.2 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review.
AQ0923TVP02 – Condition 26.1	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Conditions 18.1, 22.1(a) – (c) & (e), and Table 6, Minor Permit AQ0923MSS11	NO ₂ and SO ₂ Ambient Air Quality Protection	Limit operations to no more than 1,500 hour/year.	Yes	MR&R as required by Conditions 26.1a through 26.1e.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a) Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
18 AAC 50.055	This engine is a nonroad engine and is not subject to the Alaska SIP emission standards.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	93 / Base
2.	Date installation/construction commenced ¹	2009
3.	Date installed	April 2011
4.	Emission Unit serial number	536104761
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Detroit Diesel R1638A36
7.	Type of combustion device	Engine
8.	Rated design capacity (horsepower rating for engines)	1,495 bhp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	1,115 kWm

- ^{1.} See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 76.4 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0932TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitoring, recordkeeping, and reporting (MR&R) in accordance with Conditions 1.4, and 2 through 4.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. MR&R in accordance with Conditions 7.4, and 8 through 10.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R in accordance with Conditions 15.1 and 27.2.
AQ0923TVP02 – Conditions 20.3 and 20.3b	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1); Conditions 6 & 7, Minor Permit AQ0923MSS11	Emissions and Fuel Control Settings and Stacks	Provide the revised settings and the reason for the revision in the operating report submitted under Condition 95 for that reporting period, if the Permittee makes changes to: the emission and fuel control settings on any of the engines.	Yes	MR&R in accordance with Conditions 20.3 and 20.3b.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & (3); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR. 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review.
AQ0923TVP02 – Condition 26.1	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Conditions 18.1, 22.1(a) – (c) & (e), and Table 6, Minor Permit AQ0923MSS11	NO ₂ and SO ₂ Ambient Air Quality Protection	Limit operations to no more than 500 hour/year.	Yes	MR&R as required by Conditions 26.1a through 26.1e.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0923TVP02 – Condition 36	18 AAC 50.040(a)(1); 40 CFR 60.11(g)	NSPS Subpart A Credible Evidence	For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 41, 42, 48, and 50, nothing in 40 CFR Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether the emission unit would have been in compliance with applicable requirements of 40 CFR Part 60 if the appropriate performance or compliance test or procedure had been performed.	N/A	N/A – Advisory Provision
AQ0923TVP02 – Condition 37	18 AAC 50.040(a)(1); 40 CFR 60.12	NSPS Subpart A Concealment of Emissions	The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard.	Yes	Reasonable Inquiry
AQ0923TVP02 – Conditions 39 and 39.1	18 AAC 50.040(a)(2)(OO) & (j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & 60.4200(a)(2)(i) & (e), 60.4218 & Table 8, Subpart III	NSPS Subpart III Requirements	Comply with applicable requirements of 40 CFR 60 Subpart III for stationary compression internal combustion engines whose construction, modification, or reconstruction commenced after July 11, 2005.	Yes	MR&R in accordance with Conditions 40 through 44.
AQ0923TVP02 – Condition 40	40 CFR. 60.4206 & 60.4211(a)	NSPS Subpart III GAPCP	Except as permitted under Condition 40.1. Operate and maintain control device according to the manufacturer's written instructions and meet the applicable emissions standards over the entire life of the engine. In addition, the Permittee may only change those settings that are permitted by the manufacturer.	Yes	Record Review

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

AQ0932TVP02 – Condition 41.1	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 60.4207(b) & 80.510(b)	NSPS Subpart IIII Fuel Requirements	Burn only ULSD fuel that meets the requirements of 40 CFR 80.510(b) for non-road diesel fuel.	Yes	MR&R methods in accordance with Conditions 27.2, 43.3, and 44.
AQ0932TVP02 – Conditions 42, 42.3 and 42.4	18 AAC 50.040(a)(2)(OO) & (j)(4) & 50.326(j); 40 CFR 60.4204(b), 60.4205(b) & Table 1, Subpart IIII	NSPS Subpart IIII Emission Standards	Comply with the emission standards of 42.3a through 42.3c and the exhaust opacity of 42.4a through 42.4c.	Yes	Monitor and record as required by Condition 43.2.
AQ0923TVP02 – Condition 53	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 63.6590(c)(1)	NESHAP Subpart ZZZZ Applicability	Comply with the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart IIII.	Yes	MR&R methods in accordance with Conditions 39 through 45.
AQ0923TVP02 – Condition 79	18 AAC 50.235(a), 50.326(j)(4) & 50.040(j)(4); 40 CFR 71.6(c)(6)	Technology-Based Emission Standard	If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.23(d), causes emissions in excess of a technology-based emission standard listed in Conditions 41, 42, 48, 50, and 64 the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.	Yes	MR&R methods in accordance with Conditions 79.1, 79.2, and 94.1b.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	97 // Base
2.	Date installation/construction commenced ¹	Unknown; Rotate on/off site
3.	Date installed	Unknown; Rotate on/off site
4.	Emission Unit serial number	Unknown
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Caterpillar C-32
7.	Type of combustion device	Engine
8.	Rated design capacity (horsepower rating for engines)	1,381 bhp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	1,000 ekW

- ^{1.} See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 70.6 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a) Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
18 AAC 50.055	This engine is a nonroad engine and is not subject to the Alaska SIP emissions standards.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	102, 103, 104 // Base
2.	Date installation/construction commenced ¹	Unknown
3.	Date installed	2011
4.	Emission Unit serial number	CBN00322, CBN00323, CBN00303
	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Caterpillar 3516
7.	Type of combustion device	Engine
8.	Rated design capacity (horsepower rating for engines)	2,523 bhp, each
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

- ¹. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 128.9 gal/hr, each

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Applicable Requirements Specific to Emission Unit (attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 18.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) Condition 3, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	Operate actual drilling rig similar to or smaller than the DDR; and in all situations, operate engines with cumulative rating not exceeding 14,500 bHp.	Yes	Monitoring, recordkeeping, and reporting (MR&R) as required by Condition 20.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	General AAQS Provisions – Minimum Stack Heights Requirements	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 18.2b.	Yes	MR&R as required by Condition 20.

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3), 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	Monitor, record, and report as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
18 AAC 50.055	These engines are nonroad engines and are not subject to the SIP emissions standards.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	105 // Base
2.	Date installation/construction commenced ¹	Unknown
3.	Date installed	2011
4.	Emission Unit serial number	LLD00231
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Caterpillar 3512
7.	Type of combustion device	Engine
8.	Rated design capacity (horsepower rating for engines)	1,879 bhp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

- ^{1.} See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 96.0 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 18.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) Condition 3, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	Operate actual drilling rig similar to or smaller than the DDR; and in all situations, operate engines with cumulative rating not exceeding 14,500 bhp.	Yes	Monitoring, recordkeeping, and reporting (MR&R) as required by Condition 20.
AQ0923TVP02 – Condition 23.3	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15 and Table 5, Minor Permit AQ0923MSS11	NO ₂ and SO ₂ Ambient Air Quality Protection	Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.	Yes	Record review.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15 Minor Permit	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 18.2b.	Yes	MR&R as required by Condition 20.

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3), 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	Monitor, record, and report as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
18 AAC 50.055	This engine is a nonroad engine and is not subject to the SIP emissions standards.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	117 // Base
2.	Date installation/construction commenced ¹	Unknown
3.	Date installed	2011
4.	Emission Unit serial number	048842419
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	DEUTZ AG D914L04
7.	Type of combustion device	Engine
8.	Rated design capacity (horsepower rating for engines)	63 bhp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

- ¹. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 3.2 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 18.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1); Condition 3, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	Operate actual drilling rig similar to or smaller than the DDR; and in all situations, operate engines with cumulative rating not exceeding 14,500 bhp.	Yes	Monitoring, recordkeeping, and reporting (MR&R) as required by Condition 20.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 18.2b.	Yes	MR&R as required by Condition 20.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	Monitor, record, and report as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
18 AAC 50.055	This engine is a nonroad engine and is not subject to the SIP emissions standards.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	124 // Base
2.	Date installation/construction commenced ¹	March 2018
3.	Date installed	March 2018
4.	Emission Unit serial number	MHB00162
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Caterpillar 3516B
7.	Type of combustion device	Engine
8.	Rated design capacity (horsepower rating for engines)	2,150 bhp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

- ¹. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 109.9 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 18.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) Condition 3, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	Operate actual drilling rig similar to or smaller than the DDR; and in all situations, operate engines with cumulative rating not exceeding 14,500 bhp.	Yes	Monitoring, recordkeeping, and reporting (MR&R) as required by Condition 20.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15 Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 18.2b.	Yes	MR&R as required by Condition 20.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	Monitor, record, and report as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
18 AAC 50.055	This engine is a nonroad engine and is not subject to the SIP emissions standards.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2**Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)**

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	125 // Base
2.	Date installation/construction commenced ¹	December 2017
3.	Date installed	December 2017
4.	Emission Unit serial number	MHB00206
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Caterpillar 3516C
7.	Type of combustion device	Engine
8.	Rated design capacity (horsepower rating for engines)	2,722 bhp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

- ¹. See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates, e.g.,
- NSPS Subparts IIII and JJJJ, and NESHAP Subpart ZZZZ for engines, and
- NSPS Subparts GG and KKKK, and NESHAP Subpart YYYYY for turbines.
Note that other regulations may apply in addition to the regulations cited.

11. Fuel usage: [for EACH fuel, enter]:

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 139.1 gallons/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 18.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1); Condition 3, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Aggregate Rating Limits	Operate actual drilling rig similar to or smaller than the DDR; and in all situations, operate engines with cumulative rating not exceeding 14,500 bhp.	Yes	Monitoring, recordkeeping, and reporting (MR&R) as required by Condition 20.
AQ0923TVP02 – Condition 23.5	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 15, Minor Permit AQ0923MSS11	General AAQS Provisions – Cumulative Capacity	Comply with the cumulative capacity limit of Condition 18.2b.	Yes	MR&R as required by Condition 20.
AQ0923TVP02 – Condition 27.2	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only ultra low sulfur diesel fuel.	Yes	MR&R as required by Conditions 27.2a through 27.2d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	Monitor, record, and report as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B2

Emission Unit Detail Form - Internal Combustion Equipment (Engines and Turbines)

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
18 AAC 50.055	This engine is a nonroad engine and is not subject to the SIP emissions standards.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B4
Emission Unit Detail Form – Volatile Liquid Storage Tanks

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	118 // Base
2.	Date installation/construction commenced	2013
3.	Date installed	2013
4.	Special control requirements? [if yes, describe]	N/A
5.	Rated capacity (gallons)	12,000
6.	Tank height (ft)	23.4
7.	Tank diameter (ft)	9.38
8.	Tank age (years)	Unknown
9.	Submerged fill pipe?	Yes
10.	Type of tank (specify)	Gasoline Storage Tank
11.	Underground?	No
	If underground, specify type of tube and vapor return.	N/A
12.	Above ground vapor control information:	
	Pipe material	N/A
	Pipe size	N/A
	Piping drainage (continuous drain downward or condensate collection tank – if condensate collection, attach a description)	N/A
	Isolation valve installed in piping?	N/A
13.	Pressure vacuum relief valves:	
	Vent pressure settings (psia)	N/A
	Months in which relief valves removed (specify)	N/A
14.	Pressure conservation vent? [if yes, specify pressure setting – psia]	No
15.	Fixed roof tanks:	
	Roof color	White
	Shell color	White
	Average vapor space height (ft)	2.3
	Shell condition (specify)	Good

FORM B4

Emission Unit Detail Form – Volatile Liquid Storage Tanks

	Emission Unit ID Number	118
16.	Floating roof tanks:	
	Type of construction (specify)	N/A
	Condition (specify)	N/A
	Tank color	N/A
	Deck type (specify)	N/A
17.	External floating roof tanks, seal type (specify)	N/A
18.	Internal floating roof tanks:	
	Seal type (specify)	N/A
	Number of columns	N/A
	Effective column diameter (ft)	N/A
	Total deck seam length (ft)	N/A
	Deck fitting types – access hatch	
	bolted cover, gasketed	N/A
	unbolted cover, gasketed	N/A
	unbolted cover, ungasketed	N/A
	Deck fitting types - Automatic gauge float well	
	bolted cover, gasketed	N/A
	unbolted cover, gasketed	N/A
	unbolted cover, ungasketed	N/A
	Deck fitting types – column well	
	Built up column – sliding cover, gasketed	N/A
	Built up column – sliding cover, ungasketed	N/A
	Pipe column – flexible fabric sleeve seal	N/A
	Pipe column – sliding cover, gasketed	N/A
	Pipe column – sliding cover, ungasketed	N/A
	Deck fitting types – ladder well	
	sliding cover, gasketed	v
	sliding cover, ungasketed	N/A

FORM B4**Emission Unit Detail Form – Volatile Liquid Storage Tanks**

	Emission Unit ID Number	118
	Deck fitting types – smple well or pipe	N/A
	Slotted pipe – sliding cover, gasketed	N/A
	Slotted pipe – sliding cover, ungasketed	N/A
	Sample well – slit fabric seal, 10% open area	N/A
	Stub drain – 1-inch diameter	N/A
	Deck fitting type – roof leg or hanger will	
	Adjustable	N/A
	fixed	N/A
	Deck fitting type – vacuum breaker	
	Weighted mechanical actuation, gasketed	N/A
	Weighted mechanical actuation, ungasketed	N/A
19.	Maximum liquid loading rate (gal/hr)	9,000
20.	Submerged fill at out-loading (describe)	6" = 248 gallons
21.	Material(s) stored	
	Type of material	Gasoline
	Normal annual throughput (gal/yr)	80,000
	Normal turnovers per year	5.14
	Density (lbs/gal)	Unknown
	Molecular weight	Unknown
	Average storage temperature (°F)	Unknown
	Vapor pressure (psi)	Unknown

FORM B4

Emission Unit Detail Form – Volatile Liquid Storage Tanks

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Conditions 52 and 52.2	18 AAC 50.040(c)(1), (23), & (35), 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(1) & 63.1-63.15, Subpart A	NESHAP Subpart A – Applicability	Comply with the applicable requirements of 40 CFR 63 Subpart A consistent with 40 CFR 63 Subpart CCCCCC, Table 3.	Yes	Monitoring, recordkeeping, and reporting (MR&R) in accordance with Condition 52.2.
AQ0923TVP02 – Condition 58	18 AAC 50.040(c)(35) & (j)(4) & 50.326(j); 40 CFR 71.6(a)(1), 63.11111(a), (c) & (h); 63.11112(a) & (b); 63.11113(a)(2)	NESHAP Subpart CCCCCC – Applicability	The Permittee shall upon startup comply with applicable requirements for a gasoline storage tank (EU ID 118) as a new GDF with a monthly throughput of greater than 10,000 gallons but less than 100,000 gallons of gasoline located at an area source of HAP emissions.	Yes	MR&R as required by Condition 58.1.
AQ0923TVP02 – Conditions 59 and 59.1	40 CFR 63.11115(a) &(b)	NESHAP Subpart CCCCCC – GAPCP	At all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.	Yes	MR&R as required by Conditions 59.2, 61, and 62.
AQ0923TVP02 – Condition 60	40 CFR 63.11111(b)	NESHAP Subpart CCCCCC – Work and Management Practice Standards	Comply with the following work and management practice standards in Conditions 60.1 through 60.4, as applicable for the monthly throughput of EU ID 118.	Yes	MR&R as required by Conditions 61 and 62.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B4
Emission Unit Detail Form – Volatile Liquid Storage Tanks

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B5
Emission Unit Detail Form - Miscellaneous Emission Units

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	4 / Base
2.	Date installation/construction commenced	December 2010
3.	Date installed	December 2010
4.	Emission Unit serial number	Not available
5.	Special control requirements? [if yes, describe]	No
6.	Description of process: 0.36 MMscf/day Daily Pilot & Purge Operation 7 MMscf/day Low Pressure Emergency Operation [rated at 50 MMscf/day for High Pressure Emergency Operation]	
7.	Continuous or batch process? [if batch, maximum batches per hour]	No

8. Raw material usage: [for EACH raw material used, enter]:

Material	Maximum design capacity (lbs/batch or lbs/hr)
NA	

9. Production data: [for EACH product, enter]:

Product	Maximum design capacity (lbs/batch or lbs/hr)
NA	

10. Attach any additional information necessary to describe this process and its operating and usage parameters, both short-term and annual.

FORM B5**Emission Unit Detail Form - Miscellaneous Emission Units**

Applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements*):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Visible emissions may not reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitoring, recordkeeping, and reporting (MR&R) as required by Conditions 1.6 and 5.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. MR&R as required by Conditions 7.7 and 5.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	Sulfur compound emissions may not exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R as required by Conditions 15.1 and 27.1.
AQ0923TVP02 – Condition 21	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a); Condition 14, Minor Permit AQ0923MSS11	Limits to Avoid PSD Major Classification	Limit CO and NO _x emissions to no more than 225 tons per 12-month rolling period for each pollutant.	Yes	MR&R as required by Conditions 21.1 through 21.4.

FORM B5**Emission Unit Detail Form - Miscellaneous Emission Units**

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 27.1	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a) Condition 19, Minor Permit AQ0923MSS11	SO ₂ Ambient Air Quality Protection	Burn only natural gas with a hydrogen sulfide content that does not exceed 250 ppmv (on an instantaneous basis at standard conditions).	Yes	MR&R as required by Conditions 27.1a through 27.1d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	MR&R as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B5
Emission Unit Detail Form - Miscellaneous Emission Units

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM B5
Emission Unit Detail Form - Miscellaneous Emission Units

Permit Number: AQ0923TVP02

1.	Emission Unit ID Number // Operating Scenario	123 // Base
2.	Date installation/construction commenced	TBD
3.	Date installed	TBD
4.	Emission Unit serial number	Unknown
5.	Special control requirements? [if yes, describe]	N/A
6.	Description of process: Construction Well Test Flare [Test Flare - Pilot, Purge, and Process Gas]	
7.	Continuous or batch process? [if batch, maximum batches per hour]	N/A

8. Raw material usage: [for EACH raw material used, enter]:

Material	Maximum design capacity (lbs/batch or lbs/hr)
Fuel Gas	3 MMscf/day

9. Production data: [for EACH product, enter]:

Product	Maximum design capacity (lbs/batch or lbs/hr)
N/A	N/A

10. Attach any additional information necessary to describe this process and its operating and usage parameters, both short-term and annual.

FORM B5

Emission Unit Detail Form - Miscellaneous Emission Units

Applicable Requirements Specific to Emission Unit (attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Applicable Requirements):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0923TVP02 – Condition 1	18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Visible Emissions Standards	Visible emissions may not reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes	Incorporate revised Standard Permit Condition IX. Monitor, record, and report (MR&R) as required by Condition 5.
AQ0923TVP02 – Condition 7	18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Particulate Matter Emissions Standards	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes	Incorporate revised Standard Permit Condition IX. MR&R as required by Conditions 7.7 and 5.
AQ0923TVP02 – Condition 15	18 AAC 50.040(j)(4), 50.055(c), 50.326(j)(3) & 50.346(c); 40 CFR 71.6(a)(1)	Sulfur Compound Emissions Standards	Sulfur compound emissions may not exceed 500 ppm averaged over three hours.	Yes	Incorporate revised Standard Permit Condition XI. MR&R as required by Conditions 15.1 and 27.1.
AQ0923TVP02 – Condition 17	18 AAC 50.040(j) & 50.326(j); 40 CFR 71.6(a)(1); Condition 2, Minor Permit AQ0923MSS11	Pre-Construction Permit Requirements - Operation of Construction Well Test Flare	The Permittee shall notify the Department in accordance with Condition 92 upon startup of EU ID 123 and when it has been removed from the source.	Yes	MR&R in accordance with Conditions 17 and 92.

AQ0923TVP02 – Condition 26.3	18 AAC 50.040(j), 50.326(j); 40 CFR 71.6(a); Condition 18, Minor Permit AQ0923MSS11	NO ₂ and SO ₂ Ambient Air Quality Protection	Limit operation of EU 123 to no more than 120 days per consecutive 12-month period.	Yes	MR&R as required by Conditions 26.3a through 26.3d.
AQ0923TVP02 – Condition 74	18 AAC 50.326(j)(3) & 50.346(b)(5)	Good Air Pollution Control Practice	The Permittee shall conduct steps to ensure equipment is operated to ensure good air pollution control practice.	Yes	Monitor, record, and report as required by Conditions 74.1 through 74.3.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

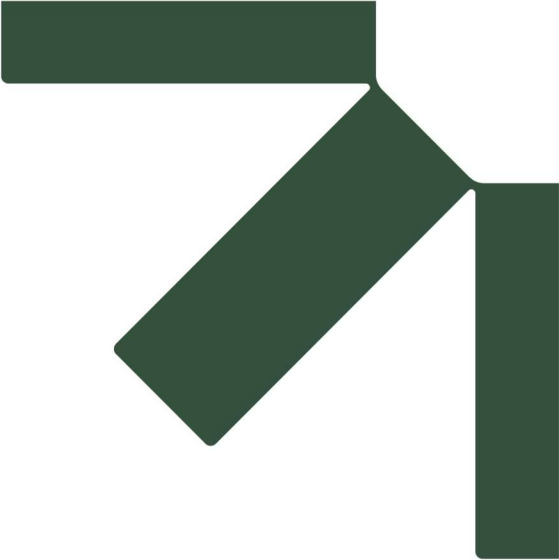
FORM B5

Emission Unit Detail Form - Miscellaneous Emission Units

Non-applicable Requirements Specific to Emission Unit (*attach additional sheets as needed. Form B Supplement - Emission Unit-Specific Permit Shield Request*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]



Appendix C Pollution Control Devices – *Not Applicable*

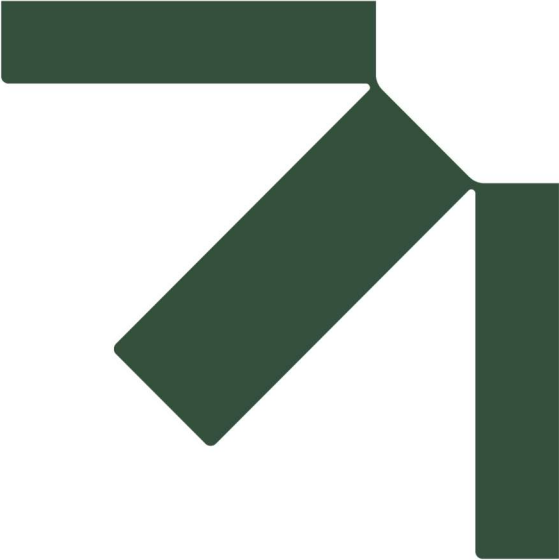
Application for Renewal of an Air Quality Title V Operating Permit

Nikaitchuq Development

Eni US Operating Co. Inc.

July 22, 2024





Appendix D Emissions Summary

Application for Renewal of an Air Quality Title V Operating Permit

Nikaitchuq Development

Eni US Operating Co. Inc.

July 22, 2024



D.1 Form D: Emissions Summary

**Table D-1. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Significant Emission Unit Inventory - Base Scenario**

Emission Unit				
ID	Name ¹	Description	Fuel	Rating/Size
Oliktok Production Pad				
1	Gas Turbine #1	Solar Taurus 70	Fuel Gas	8.25 MW
2	Gas Turbine #2	Solar Taurus 70	Fuel Gas	8.25 MW
32	Dual Fuel Turbine #3	Solar Taurus 70	Fuel Gas	8.25 MW
			Diesel	7.70 MW
33	Gas Turbine #4	Solar Taurus 70	Fuel Gas	8.25 MW
3	OPP Standby Generator - Reciprocating Engine	16V 4000 G82 D	Diesel	2.50 MW
4	Daily Purge & Pilot Operation	Process Safety Flare	Fuel Gas	0.36 MMscf/day
	Low Pressure Emergency Operation		Fuel Gas	7.4 MMscf/day
70	OPP WIF Boiler #2	Well McLain 780	Diesel	0.935 MMBtu/hr
71	OPP WIF Boiler #3	Well McLain 780	Diesel	0.935 MMBtu/hr
78	Construction Power Generator #1 (NRE)	Caterpillar 3616C	Diesel	2,763 bhp
106	Standby Heater	Newpoint Thermal	Fuel Gas	10.5 MMBtu/hr
Nikaitchuq Operations Center				
93	NOC Standby Generator - Reciprocating Engine	MTU 16V 2000 G84	Diesel	1,495 hp
94	NOC Camp Boiler #1	Fulton Reliance	Propane	2 MMBtu/hr
95	NOC Camp Boiler #2	Fulton Reliance	Propane	2 MMBtu/hr
97	Construction Power Generator #2 (NRE)	CAT C-32	Diesel	1,381 bhp
111	NOC Warm Storage Boiler #1	Weil-McLain 780	Propane	0.935 MMBtu/hr
112	NOC Warm Storage Boiler #2	Weil-McLain 780	Propane	0.935 MMBtu/hr
118	Gasoline Dispensing Facility Tank 110	Storage Tank	Gasoline	12,000 gallons
Spy Island Drillsite				
47	SID Standby Generator E04 - Reciprocating Engine	MTU 16V 4000 G83	Diesel	3,351 bhp
49	SID Standby Generator E07 - Reciprocating Engine	Caterpillar 3516C	Diesel	3,635 bhp
50	Fire Water Pump	John Deere 6068 E	Diesel	183 bhp
108	Tent Heating Boiler #2	Burnham V110-WO	Diesel	2.43 MMBtu/hr
109	SID WIF Boiler #1	Burnham FD-38	Diesel	1.73 MMBtu/hr
110	SID WIF Boiler #2	Burnham FD-38	Diesel	1.73 MMBtu/hr
114	Mud Tank Farm Boiler #1	Burnham FD-14	Diesel	0.65 MMBtu/hr
115	Mud Tank Farm Boiler #2	Burnham FD-14	Diesel	0.65 MMBtu/hr
64	SID WIF Generator Reciprocating Engine	John Deere 6090HF485	Diesel	422 bhp
68	Cement Pump Engine #1	Detroit Diesel 8V-71N	Diesel	320 bhp
116	Cement Pump Engine #2	Detroit Diesel 8V-71N	Diesel	320 bhp
123	Construction Well Test Flare	Pilot, Purge and Process Gas	Fuel Gas	3 MMscf/day
On-Shore Development Drilling Rig ²				
9a	Rig Boiler #1	York-Shibley	Diesel	3.4 MMBtu/hr
10a	Rig Boiler #2	York-Shibley	Diesel	3.4 MMBtu/hr
11a	Air Heater	Tioga 1DF-21B0	Diesel	4.2 MMBtu/hr
12	Rig Heater #2	Tioga 1DF-21B0	Diesel	4.2 MMBtu/hr
13	Rig Heater #3	Tioga 1DF-11C0	Diesel	2.5 MMBtu/hr
14	Rig Engine #1 (NRE)	Caterpillar D399	Diesel	1,128 bhp
15	Rig Engine #2 (NRE)	Caterpillar D399	Diesel	1,128 bhp
16	Rig Engine #3 (NRE)	Caterpillar D399	Diesel	1,128 bhp
17	Rig Engine #4 (NRE)	Caterpillar D399	Diesel	1,128 bhp
18	Coldstart Motors (NRE)	Caterpillar D353	Diesel	233 bhp
74	Reciprocating Engine #1 (NRE)	Cummins	Diesel	303 bhp
75	Reciprocating Engine #2 (NRE)	Cummins	Diesel	303 bhp

**Table D-1. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Significant Emission Unit Inventory - Base Scenario**

Emission Unit				
ID	Name ¹	Description	Fuel	Rating/Size
Off-Shore Development Drilling Rig ³				
98a	Rig Boiler #1	Superior Boiler	Diesel	3.3 MMBtu/hr
99a	Rig Boiler #2	Superior Boiler	Diesel	3.3 MMBtu/hr
100	Rig Heater #1	Dick's Air Heater	Diesel	3.5 MMBtu/hr
101	Rig Heater #2	Dick's Air Heater	Diesel	5.0 MMBtu/hr
102	Reciprocating Engine #1 (NRE)	Caterpillar 3516	Diesel	2,523 bhp
103	Reciprocating Engine #2 (NRE)	Caterpillar 3516	Diesel	2,523 bhp
104	Reciprocating Engine #3 (NRE)	Caterpillar 3516	Diesel	2,523 bhp
105	Reciprocating Engine #4 (NRE)	Caterpillar 3512	Diesel	1,879 bhp
117	Mud Pump #3 Coldstart (NRE)	DEUTZ AG	Diesel	63 bhp
124	Reciprocating Engine #5 (NRE)	Caterpillar 3516B	Diesel	2,150 bhp
125	Reciprocating Engine #6 (NRE)	Caterpillar 3516C	Diesel	2,722 bhp
Intermittent Well Servicing Equipment (Workover Rig) ⁴				
19	Peak Crane (NRE)	Unknown	Diesel	650 bhp
20	Manitowoc Crane (NRE)	Unknown	Diesel	575 bhp
23	Hot Oiler Boiler / Heater #1	Unknown	Diesel	6 MMBtu/hr
24	Hot Oiler Boiler / Heater #2	Unknown	Diesel	9.5 MMBtu/hr

Notes:

¹ NRE means nonroad engine.

² On-Shore Development drill rig inventory is based on Nordic Rig No. 4.

³ Off-Shore Development drill rig inventory is based on Doyon 15; the off-shore rig will be either the same size or smaller than Doyon 15.

⁴ Actual Workover Drill Rig (Intermittent Emission Units) parameters will either be the same size or smaller than the Workover Rig presented.

**Table D-2. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Insignificant Emission Unit Inventory - Base Scenario**

Emission Unit					
ID	Name	Description	Fuel	Rating/Size	Basis of Insignificance
Oliktok Production Pad					
NA	Condensate Tank S	Storage Tank	Condensate	1,176 gallons	18 AAC 50.326(g)(3)
NA	WIF Bulk Rectangular Diesel Tank	Storage Tank	Diesel	3,000 gallons	18 AAC 50.326(g)(3)
NA	WIF Boiler Diesel Fuel Tank	Storage Tank	Diesel	150 gallons	18 AAC 50.326(g)(3)
5	Slop Oil Tank A	Process Tank	NA	750 bbls	18 AAC 50.326(e)
6	Slop Oil Tank B	Process Tank	NA	750 bbls	18 AAC 50.326(e)
34	Slop Oil Tank C	Process Tank	NA	750 bbls	18 AAC 50.326(e)
35	Slop Oil Tank D	Process Tank	NA	750 bbls	18 AAC 50.326(e)
36	Slop Oil Tank E	Process Tank	NA	750 bbls	18 AAC 50.326(e)
37	Slop Oil Tank F	Process Tank	NA	750 bbls	18 AAC 50.326(e)
38	Slop Oil Tank G	Process Tank	NA	750 bbls	18 AAC 50.326(e)
39	Slop Oil Tank H	Process Tank	NA	750 bbls	18 AAC 50.326(e)
40	Slop Oil Tank I	Process Tank	NA	750 bbls	18 AAC 50.326(e)
41	Slop Oil Tank J	Process Tank	NA	750 bbls	18 AAC 50.326(e)
7	Diesel Tank O	Storage Tank	Diesel	600 bbls	18 AAC 50.326(e)
8	Base Oil Tank K	Storage Tank	NA	400 bbls	18 AAC 50.326(e)
42	Diesel Tank P	Storage Tank	Diesel	600 bbls	18 AAC 50.326(e)
43	Corrosion Inhibitor Storage Tank R	Storage Tank	NA	600 bbls	18 AAC 50.326(e)
44	Antifoam Storage Tank N	Storage Tank	NA	200 bbls	18 AAC 50.326(g)(3)
45	Scale Inhibitor Storage Tank L	Storage Tank	NA	200 bbls	18 AAC 50.326(g)(3)
46	Emulsion Breaker Storage Tank M	Storage Tank	NA	200 bbls	18 AAC 50.326(g)(3)
119	Diesel Tank Q	Storage Tank	Diesel	600 bbls	18 AAC 50.326(e)
Nikaitchuq Operations Center					
NA	Diesel Emergency Generator Engine Tank	Storage Tank	Diesel	5,000 gallons	18 AAC 50.326(g)(3)
NA	NOC Helicopter Hanger Jet-A Tank	Storage Tank	Jet-A	2,000 gallons	18 AAC 50.326(g)(3)
120	Diesel Dispensing Facility Tank 110	Storage Tank	Diesel	12,000 gallons	18 AAC 50.326(e)
121	Diesel Dispensing Facility Tank 120	Storage Tank	Diesel	12,000 gallons	18 AAC 50.326(e)
122	Diesel Dispensing Facility Tank 130	Storage Tank	Diesel	12,000 gallons	18 AAC 50.326(e)
Spy Island Drillsite					
NA	WIF Storage Tank	Storage Tank	Diesel	3,570 gallons	18 AAC 50.326(g)(3)
NA	Motor Room, Diesel Day Tank	Storage Tank	Diesel	3,245 gallons	18 AAC 50.326(g)(3)
NA	Pipe Shed Diesel Tank	Storage Tank	Diesel	1,818 gallons	18 AAC 50.326(g)(3)
NA	Pipe Shed Diesel Tank	Storage Tank	Diesel	9,873 gallons	18 AAC 50.326(g)(3)
NA	Pipe Shed Diesel Tank	Storage Tank	Diesel	9,957 gallons	18 AAC 50.326(g)(3)
51	Diesel Tank A	Storage Tank	Diesel	750 bbls	18 AAC 50.326(e)
52	Diesel Tank B	Storage Tank	Diesel	750 bbls	18 AAC 50.326(e)
53	Diesel Tank C	Storage Tank	Diesel	750 bbls	18 AAC 50.326(e)
54	Base Oil Tank D	Storage Tank	NA	750 bbls	18 AAC 50.326(e)
55	Base Oil Tank E	Storage Tank	NA	750 bbls	18 AAC 50.326(e)
56	Corrosion Inhibitor Tank F	Storage Tank	NA	750 bbls	18 AAC 50.326(e)
57	Scale Inhibitor Tank G	Storage Tank	NA	400 bbls	18 AAC 50.326(e)
58	Friction Reducer Tank H	Storage Tank	NA	750 bbls	18 AAC 50.326(e)
59	Future Chemical Tank I	Storage Tank	NA	750 bbls	18 AAC 50.326(e)
60	Contaminated Base Oil/Diesel Tank J	Storage Tank	NA	200 bbls	18 AAC 50.326(g)(3)
61	Biocide Tank K	Storage Tank	NA	750 bbls	18 AAC 50.326(e)
62	Future Chemical Tank L	Storage Tank	NA	750 bbls	18 AAC 50.326(e)
63	Disposal Fluids Tank U	Storage Tank	NA	1,000 bbls	18 AAC 50.326(e)

**Table D-3. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Expected Actual Annual Emissions (After Controls/Limitations)**

Emission Unit			Annual Emissions (tpy) ¹						
ID	Name	Fuel	NO _x	CO	PM ₁₀	VOC	SO ₂	HAP ²	CO ₂ e ³
Significant Emission Units									
1	Gas Turbine #1	Fuel Gas	18.3	7.0	2.3	12.4	0.3	0.0	46,402
2	Gas Turbine #2	Fuel Gas	16.5	7.5	2.1	11.3	0.3	0.0	44,492
32	Dual Fuel Turbine #3	Fuel Gas	6.4	6.8	0.6	3.3	0.1	0.0	12,915
		Diesel	0.2	0.1	0.0	0.02	0.905	0.0	121
33	Gas Turbine #4	Fuel Gas	14.9	4.2	2.2	11.9	0.2	0.0	37,357
3	OPP Standby Generator - Reciprocating Engine	Diesel	0.7	0.1	0.01	0.01	2.04E-04	0.0	79
4	Daily Purge & Pilot Operation	Fuel Gas	1.2	5.5	0.4	2.5	0.2	0.0	1,989
	Low Pressure Emergency Operation	Fuel Gas							
70	OPP WIF Boiler #2	Diesel	0.0	0.00	0.00	0.000	0.000	0.0	222
71	OPP WIF Boiler #3	Diesel	0.0	0.00	0.00	0.000	0.000	0.0	219
78	Construction Power Generator #1 (NRE)	Diesel	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	0	0	0	0	0	0.0	0
93	NOC Standby Generator - Reciprocating Engine	Diesel	0.1	0.01	0.00	0.002	0.0001	0.0	39
94	NOC Camp Boiler #1	Propane	0.00	1.62E-03	0.0002	0.000	0.000	0.0	13
95	NOC Camp Boiler #2	Propane	0.00	1.62E-03	0.0002	0.000	0.000	0.0	12
97	Construction Power Generator #2 (NRE)	Diesel	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.3	0.170	0.02	0.03	0.04	0.0	352
112	NOC Warm Storage Boiler #2	Propane	0.3	0.170	0.02	0.03	0.04	0.0	352
118	Gasoline Dispensing Facility Tank 110	Gasoline	0	0	0	0.0	0	0.0	0
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	0.3	0.0	0.00	0.01	0.000	0.0	94
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	0.2	0.02	0.002	0.01	0.0002	0.0	60
50	Fire Water Pump	Diesel	0.01	0.006	0.0005	0.001	2.84E-05	0.0	3
108	Tent Heating Boiler #2	Diesel	0.1	0.0	0.0	0.00	0.03	0.0	1,017
109	SID WIF Boiler #1	Diesel	0.2	0.05	0.04	0.004	0.039	0.0	212
110	SID WIF Boiler #2	Diesel	0.1	0.02	0.01	0.001	0.014	0.0	212
114	Mud Tank Farm Boiler #1	Diesel	0.12	0.029	0.019	0.0020	0.0081	0.0	18
115	Mud Tank Farm Boiler #2	Diesel	0.14	0.04	0.02	0.002	0.0099	0.0	59
64	SID WIF Generator Reciprocating Engine	Diesel	0.0	0.00	0.000	0.0000	0.0000	0.0	33
68	Cement Pump Engine #1	Diesel	0.01	0.01	0.002	0.003	1.34E-05	0.0	2
116	Cement Pump Engine #2	Diesel	0.01	0.01	0.005	0.005	0.0004	0.0	2
123	Construction Well Test Flare	Fuel Gas	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	0.7	0.17	0.12	0.012	0.0240	0.0	241
10a	Rig Boiler #2	Diesel	0.7	0.2	0.1	0.01	0.0240	0.0	695
11a	Air Heater	Diesel	0.9	0.2	0.1	0.01	0.0377	0.0	605
12	Rig Heater #2	Diesel	0	0	0	0	0	0.0	0
13	Rig Heater #3	Diesel	0	0	0	0	0	0.0	0
14	Rig Engine #1 (NRE)	Diesel	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	0.8	0.2	0.1	0.01	0.026	0.0	1,048
99a	Rig Boiler #2	Diesel	0.8	0.2	0.1	0.01	0.028	0.0	763
100	Rig Heater #1	Diesel	0.4	0.1	0.1	0.01	0.013	0.0	1,757
101	Rig Heater #2	Diesel	0.4	0.1	0.1	0.01	0.019	0.0	2,170
102	Reciprocating Engine #1 (NRE)	Diesel	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	---	---	---	---	---	---	---
23	Hot Oiler Boiler / Heater #1	Diesel	0	0	0	0	0	0.0	0
24	Hot Oiler Boiler / Heater #2	Diesel	0	0	0	0	0	0.0	0

**Table D-3. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Expected Actual Annual Emissions (After Controls/Limitations)**

Emission Unit			Annual Emissions (tpy) ¹						
ID	Name	Fuel	NO _x	CO	PM ₁₀	VOC	SO ₂	HAP ²	CO ₂ e ³
Insignificant Emission Units									
NA	Condensate Tank S	Condensate	0	0	0	0	0	0	0
NA	WIF Bulk Rectangular Diesel Tank	Diesel	0	0	0	0	0	0	0
NA	WIF Boiler Diesel Fuel Tank	Diesel	0	0	0	0	0	0	0
NA	Diesel Emergency Generator Engine Tank	Diesel	0	0	0	0	0	0	0
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	0	0	0	0	0	0	0
NA	WIF Storage Tank	Diesel	0	0	0	0	0	0	0
NA	Motor Room, Diesel Day Tank	Diesel	0	0	0	0	0	0	0
NA	Pipe Shed Diesel Tank	Diesel	0	0	0	0	0	0	0
NA	Pipe Shed Diesel Tank	Diesel	0	0	0	0	0	0	0
NA	Pipe Shed Diesel Tank	Diesel	0	0	0	0	0	0	0
5	Slop Oil Tank A	NA	0	0	0	0	0	0	0
6	Slop Oil Tank B	NA	0	0	0	0	0	0	0
34	Slop Oil Tank C	NA	0	0	0	0	0	0	0
35	Slop Oil Tank D	NA	0	0	0	0	0	0	0
36	Slop Oil Tank E	NA	0	0	0	0	0	0	0
37	Slop Oil Tank F	NA	0	0	0	0	0	0	0
38	Slop Oil Tank G	NA	0	0	0	0	0	0	0
39	Slop Oil Tank H	NA	0	0	0	0	0	0	0
40	Slop Oil Tank I	NA	0	0	0	0	0	0	0
41	Slop Oil Tank J	NA	0	0	0	0	0	0	0
7	Diesel Tank O	Diesel	0	0	0	0	0	0	0
8	Base Oil Tank K	NA	0	0	0	0	0	0	0
42	Diesel Tank P	Diesel	0	0	0	0	0	0	0
43	Corrosion Inhibitor Storage Tank R	NA	0	0	0	0	0	0	0
44	Antifoam Storage Tank N	NA	0	0	0	0	0	0	0
45	Scale Inhibitor Storage Tank L	NA	0	0	0	0	0	0	0
46	Emulsion Breaker Storage Tank M	NA	0	0	0	0	0	0	0
51	Diesel Tank A	Diesel	0	0	0	0	0	0	0
52	Diesel Tank B	Diesel	0	0	0	0	0	0	0
53	Diesel Tank C	Diesel	0	0	0	0	0	0	0
54	Base Oil Tank D	NA	0	0	0	0	0	0	0
55	Base Oil Tank E	NA	0	0	0	0	0	0	0
56	Corrosion Inhibitor Tank F	NA	0	0	0	0	0	0	0
57	Scale Inhibitor Tank G	NA	0	0	0	0	0	0	0
58	Friction Reducer Tank H	NA	0	0	0	0	0	0	0
59	Future Chemical Tank I	NA	0	0	0	0	0	0	0
60	Contaminated Base Oil/Diesel Tank J	NA	0	0	0	0	0	0	0
61	Biocide Tank K	NA	0	0	0	0	0	0	0
62	Future Chemical Tank L	NA	0	0	0	0	0	0	0
63	Disposal Fluids Tank U	NA	0	0	0	0	0	0	0
119	Diesel Tank Q	Diesel	0	0	0	0	0	0	0
120	Diesel Dispensing Facility Tank 110	Diesel	0	0	0	0	0	0	0
121	Diesel Dispensing Facility Tank 120	Diesel	0	0	0	0	0	0	0
122	Diesel Dispensing Facility Tank 130	Diesel	0	0	0	0	0	0	0
Total			64.7	32.9	8.5	41.6	2.3	0	153,555.1

Notes:

¹ NREs and construction phase air emissions do not count towards stationary source classification, per 18 AAC 50.100 and ADEC Policy and Procedure 04.02.104. Form Series D Instructions requires emissions from nonroad engines to not be included.

² HAP totals only include the non-VOC portion for each HAP in total amounts greater than 0.1 tons per year, per unit, as prescribed under Form Series D Instructions.

³ CO₂e includes the global warming potential for CO₂ (1), CH₄ (25), and N₂O (298).

**Table D-4. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Potential Annual Emissions (Before Controls/Limitations)**

Emission Unit			Annual Emissions (tpy) ¹						
ID	Name	Fuel	NO _x	CO	PM ₁₀	VOC	SO ₂	HAP ²	CO ₂ e ³
Significant Emission Units									
1	Gas Turbine #1	Fuel Gas	23.7	23.7	2.4	13.1	13.6	0.0	47,676
2	Gas Turbine #2	Fuel Gas	23.7	23.7	2.4	13.1	13.6	0.0	47,676
32	Dual Fuel Turbine #3 ⁴	Fuel Gas	138.0	43.8	4.1	13.1	13.6	0.3	55,746
		Diesel							
33	Gas Turbine #4	Fuel Gas	23.7	23.7	2.4	13.1	13.6	0.0	47,676
3	OPP Standby Generator - Reciprocating Engine	Diesel	217.2	28.3	3.3	3.1	0.09	0.0	16,817
4	Daily Purge & Pilot Operation	Fuel Gas	5.0	23.0	1.6	10.4	0.1	0.0	9,681
	Low Pressure Emergency Operation	Fuel Gas	103.6	472.2	33.1	213.3	2.4	0.0	199,000
70	OPP WIF Boiler #2	Diesel	0.9	0.2	0.1	0.01	0.009	0.0	838
71	OPP WIF Boiler #3	Diesel	0.9	0.2	0.1	0.01	0.009	0.0	838
78	Construction Power Generator #1 (NRE)	Diesel	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	4.1	3.4	0.3	0.2	2.1	0.0	7,510
93	NOC Standby Generator - Reciprocating Engine	Diesel	90.2	8.8	1.6	1.1	0.08	0.0	7,499
94	NOC Camp Boiler #1	Propane	1.3	0.73	0.08	0.1	0.2	0.0	1,507
95	NOC Camp Boiler #2	Propane	1.3	0.73	0.08	0.1	0.2	0.0	1,507
97	Construction Power Generator #2 (NRE)	Diesel	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.6	0.340	0.04	0.06	0.09	0.0	705
112	NOC Warm Storage Boiler #2	Propane	0.6	0.340	0.04	0.06	0.09	0.0	705
118	Gasoline Dispensing Facility Tank 110	Gasoline	0	0	0	0.0	0	0.0	0
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	217.1	28.5	1.6	9.4	0.2	0.0	16,810
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	186.0	17.2	1.4	5.3	0.2	0.0	18,235
50	Fire Water Pump	Diesel	4.4	1.9	0.2	0.4	0.01	0.0	918
108	Tent Heating Boiler #2	Diesel	2.2	0.6	0.4	0.04	0.02	0.0	2,177
109	SID WIF Boiler #1	Diesel	1.6	0.4	0.3	0.03	0.02	0.0	1,550
110	SID WIF Boiler #2	Diesel	1.6	0.4	0.3	0.03	0.02	0.0	1,550
114	Mud Tank Farm Boiler #1	Diesel	0.6	0.1	0.1	0.01	0.006	0.0	581
115	Mud Tank Farm Boiler #2	Diesel	0.6	0.1	0.1	0.01	0.006	0.0	581
64	SID WIF Generator Reciprocating Engine	Diesel	14.1	2.2	0.3	0.01	0.02	0.0	2,117
68	Cement Pump Engine #1	Diesel	9.3	8.0	3.1	3.5	0.02	0.0	1,605
116	Cement Pump Engine #2	Diesel	9.3	8.0	3.1	3.5	0.02	0.0	1,605
123	Construction Well Test Flare	Fuel Gas	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.1	0.8	0.5	0.05	0.03	0.0	3,001
10a	Rig Boiler #2	Diesel	3.1	0.8	0.5	0.05	0.03	0.0	3,001
11a	Air Heater	Diesel	3.8	1.0	0.6	0.07	0.04	0.0	3,762
12	Rig Heater #2	Diesel	3.8	1.0	0.6	0.07	0.04	0.0	3,762
13	Rig Heater #3	Diesel	2.3	0.6	0.4	0.04	0.02	0.0	2,239
14	Rig Engine #1 (NRE)	Diesel	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.0	0.8	0.5	0.05	0.03	0.0	2,956
99a	Rig Boiler #2	Diesel	3.0	0.8	0.5	0.05	0.03	0.0	2,956
100	Rig Heater #1	Diesel	3.2	0.8	0.5	0.05	0.03	0.0	3,135
101	Rig Heater #2	Diesel	4.6	1.1	0.8	0.08	0.05	0.0	4,479
102	Reciprocating Engine #1 (NRE)	Diesel	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	---	---	---	---	---	---	---
23	Hot Oiler Boiler / Heater #1	Diesel	5.5	1.4	0.9	0.09	0.06	0.0	5,375
24	Hot Oiler Boiler / Heater #2	Diesel	8.7	2.2	1.4	0.1	0.09	0.0	8,510

**Table D-4. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Potential Annual Emissions (Before Controls/Limitations)**

Emission Unit			Annual Emissions (tpy) ¹						
ID	Name	Fuel	NO _x	CO	PM ₁₀	VOC	SO ₂	HAP ²	CO ₂ e ³
Insignificant Emission Units									
NA	Condensate Tank S	Condensate	0	0	0	0	0	0	0
NA	WIF Bulk Rectangular Diesel Tank	Diesel	0	0	0	0	0	0	0
NA	WIF Boiler Diesel Fuel Tank	Diesel	0	0	0	0	0	0	0
NA	Diesel Emergency Generator Engine Tank	Diesel	0	0	0	0	0	0	0
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	0	0	0	0	0	0	0
NA	WIF Storage Tank	Diesel	0	0	0	0	0	0	0
NA	Motor Room, Diesel Day Tank	Diesel	0	0	0	0	0	0	0
NA	Pipe Shed Diesel Tank	Diesel	0	0	0	0	0	0	0
NA	Pipe Shed Diesel Tank	Diesel	0	0	0	0	0	0	0
NA	Pipe Shed Diesel Tank	Diesel	0	0	0	0	0	0	0
5	Slop Oil Tank A	NA	0	0	0	0	0	0	0
6	Slop Oil Tank B	NA	0	0	0	0	0	0	0
34	Slop Oil Tank C	NA	0	0	0	0	0	0	0
35	Slop Oil Tank D	NA	0	0	0	0	0	0	0
36	Slop Oil Tank E	NA	0	0	0	0	0	0	0
37	Slop Oil Tank F	NA	0	0	0	0	0	0	0
38	Slop Oil Tank G	NA	0	0	0	0	0	0	0
39	Slop Oil Tank H	NA	0	0	0	0	0	0	0
40	Slop Oil Tank I	NA	0	0	0	0	0	0	0
41	Slop Oil Tank J	NA	0	0	0	0	0	0	0
7	Diesel Tank O	Diesel	0	0	0	0	0	0	0
8	Base Oil Tank K	NA	0	0	0	0	0	0	0
42	Diesel Tank P	Diesel	0	0	0	0	0	0	0
43	Corrosion Inhibitor Storage Tank R	NA	0	0	0	0	0	0	0
44	Antifoam Storage Tank N	NA	0	0	0	0	0	0	0
45	Scale Inhibitor Storage Tank L	NA	0	0	0	0	0	0	0
46	Emulsion Breaker Storage Tank M	NA	0	0	0	0	0	0	0
51	Diesel Tank A	Diesel	0	0	0	0	0	0	0
52	Diesel Tank B	Diesel	0	0	0	0	0	0	0
53	Diesel Tank C	Diesel	0	0	0	0	0	0	0
54	Base Oil Tank D	NA	0	0	0	0	0	0	0
55	Base Oil Tank E	NA	0	0	0	0	0	0	0
56	Corrosion Inhibitor Tank F	NA	0	0	0	0	0	0	0
57	Scale Inhibitor Tank G	NA	0	0	0	0	0	0	0
58	Friction Reducer Tank H	NA	0	0	0	0	0	0	0
59	Future Chemical Tank I	NA	0	0	0	0	0	0	0
60	Contaminated Base Oil/Diesel Tank J	NA	0	0	0	0	0	0	0
61	Biocide Tank K	NA	0	0	0	0	0	0	0
62	Future Chemical Tank L	NA	0	0	0	0	0	0	0
63	Disposal Fluids Tank U	NA	0	0	0	0	0	0	0
119	Diesel Tank Q	Diesel	0	0	0	0	0	0	0
120	Diesel Dispensing Facility Tank 110	Diesel	0	0	0	0	0	0	0
121	Diesel Dispensing Facility Tank 120	Diesel	0	0	0	0	0	0	0
122	Diesel Dispensing Facility Tank 130	Diesel	0	0	0	0	0	0	0
Total			1,125.1	731.5	69.9	303.8	60.8	0.3	536,285.3

Notes:

¹ NREs and construction phase air emissions do not count towards stationary source classification, per 18 AAC 50.100 and ADEC Policy and Procedure 04.02.104. Form Series D Instructions requires emissions from nonroad engines to not be included.

² HAP totals only include the non-VOC portion for each HAP in total amounts greater than 0.1 tons per year, per unit, as prescribed under Form Series D Instructions.

³ CO₂e includes the global warming potential for CO₂ (1), CH₄ (25), and N₂O (298).

⁴ Worst case emissions estimated for fuel gas or diesel use.

**Table D-5. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Potential Annual Emissions (After Controls/Limitations)**

Emission Unit			Annual Emissions (tpy) ¹						
ID	Name	Fuel	NO _x	CO	PM ₁₀	VOC	SO ₂	HAP ²	CO ₂ e ³
Significant Emission Units									
1	Gas Turbine #1	Fuel Gas	23.7	23.7	2.4	13.1	13.6	0.0	47,676
2	Gas Turbine #2	Fuel Gas	23.7	23.7	2.4	13.1	13.6	0.0	47,676
32	Dual Fuel Turbine #3	Fuel Gas	22.0	22.0	2.2	12.2	12.7	0.0	44,410
		Diesel	9.5	3.0	0.3	0.9	0.1	0.0	3,817
33	Gas Turbine #4	Fuel Gas	23.7	23.7	2.4	13.1	13.6	0.0	47,676
3	OPP Standby Generator - Reciprocating Engine	Diesel	49.6	6.5	0.8	0.7	0.02	0.0	3,840
4	Daily Purge & Pilot Operation	Fuel Gas	5.0	23.0	1.6	10.4	0.1	0.0	9,681
	Low Pressure Emergency Operation	Fuel Gas	3.7	17.0	8.9	7.7	2.1	0.0	7,183
70	OPP WIF Boiler #2	Diesel	0.9	0.2	0.1	0.01	0.009	0.0	838
71	OPP WIF Boiler #3	Diesel	0.9	0.2	0.1	0.01	0.009	0.0	838
78	Construction Power Generator #1 (NRE)	Diesel	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	4.1	3.4	0.3	0.2	2.1	0.0	7,510
93	NOC Standby Generator - Reciprocating Engine	Diesel	5.1	0.5	0.09	0.06	0.004	0.0	428
94	NOC Camp Boiler #1	Propane	1.3	0.7	0.08	0.1	0.2	0.0	1,507
95	NOC Camp Boiler #2	Propane	1.3	0.7	0.08	0.1	0.2	0.0	1,507
97	Construction Power Generator #2 (NRE)	Diesel	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.6	0.340	0.04	0.06	0.09	0.0	705
112	NOC Warm Storage Boiler #2	Propane	0.6	0.340	0.04	0.06	0.09	0.0	705
118	Gasoline Dispensing Facility Tank 110	Gasoline	0	0	0	0.0	0	0.0	0
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	217.1	28.5	1.6	9.4	0.2	0.0	16,810
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	42.5	3.9	0.3	1.2	0.04	0.0	4,163
50	Fire Water Pump	Diesel	0.05	0.02	0.002	0.004	0.0001	0.0	10
108	Tent Heating Boiler #2	Diesel	2.2	0.6	0.4	0.04	0.02	0.0	2,177
109	SID WIF Boiler #1	Diesel	1.6	0.4	0.3	0.03	0.02	0.0	1,550
110	SID WIF Boiler #2	Diesel	1.6	0.4	0.3	0.03	0.02	0.0	1,550
114	Mud Tank Farm Boiler #1	Diesel	0.6	0.1	0.1	0.01	0.006	0.0	581
115	Mud Tank Farm Boiler #2	Diesel	0.6	0.1	0.1	0.01	0.01	0.0	581
64	SID WIF Generator Reciprocating Engine	Diesel	14.1	2.2	0.3	0.01	0.02	0.0	2,117
68	Cement Pump Engine #1	Diesel	9.3	8.0	3.1	3.5	0.02	0.0	1,605
116	Cement Pump Engine #2	Diesel	9.3	8.0	3.1	3.5	0.02	0.0	1,605
123	Construction Well Test Flare	Fuel Gas	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.1	0.8	0.5	0.05	0.03	0.0	3,001
10a	Rig Boiler #2	Diesel	3.1	0.8	0.5	0.05	0.03	0.0	3,001
11a	Air Heater	Diesel	3.8	1.0	0.6	0.07	0.04	0.0	3,762
12	Rig Heater #2	Diesel	3.8	1.0	0.6	0.07	0.04	0.0	3,762
13	Rig Heater #3	Diesel	2.3	0.6	0.4	0.04	0.02	0.0	2,239
14	Rig Engine #1 (NRE)	Diesel	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.0	0.8	0.5	0.05	0.03	0.0	2,956
99a	Rig Boiler #2	Diesel	3.0	0.8	0.5	0.05	0.03	0.0	2,956
100	Rig Heater #1	Diesel	3.2	0.8	0.5	0.05	0.03	0.0	3,135
101	Rig Heater #2	Diesel	4.6	1.1	0.8	0.08	0.05	0.0	4,479
102	Reciprocating Engine #1 (NRE)	Diesel	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	---	---	---	---	---	---	---
23	Hot Oiler Boiler / Heater #1	Diesel	0.8	0.2	0.1	0.01	0.008	0.0	810
24	Hot Oiler Boiler / Heater #2	Diesel	1.3	0.3	0.2	0.02	0.01	0.0	1,282

**Table D-5. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Potential Annual Emissions (After Controls/Limitations)**

Emission Unit			Annual Emissions (tpy) ¹						
ID	Name	Fuel	NO _x	CO	PM ₁₀	VOC	SO ₂	HAP ²	CO ₂ e ³
Insignificant Emission Units									
NA	Condensate Tank S	Condensate	0	0	0	0	0	0	0
NA	WIF Bulk Rectangular Diesel Tank	Diesel	0	0	0	0	0	0	0
NA	WIF Boiler Diesel Fuel Tank	Diesel	0	0	0	0	0	0	0
NA	Diesel Emergency Generator Engine Tank	Diesel	0	0	0	0	0	0	0
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	0	0	0	0	0	0	0
NA	WIF Storage Tank	Diesel	0	0	0	0	0	0	0
NA	Motor Room, Diesel Day Tank	Diesel	0	0	0	0	0	0	0
NA	Pipe Shed Diesel Tank	Diesel	0	0	0	0	0	0	0
NA	Pipe Shed Diesel Tank	Diesel	0	0	0	0	0	0	0
NA	Pipe Shed Diesel Tank	Diesel	0	0	0	0	0	0	0
5	Slop Oil Tank A	NA	0	0	0	0	0	0	0
6	Slop Oil Tank B	NA	0	0	0	0	0	0	0
34	Slop Oil Tank C	NA	0	0	0	0	0	0	0
35	Slop Oil Tank D	NA	0	0	0	0	0	0	0
36	Slop Oil Tank E	NA	0	0	0	0	0	0	0
37	Slop Oil Tank F	NA	0	0	0	0	0	0	0
38	Slop Oil Tank G	NA	0	0	0	0	0	0	0
39	Slop Oil Tank H	NA	0	0	0	0	0	0	0
40	Slop Oil Tank I	NA	0	0	0	0	0	0	0
41	Slop Oil Tank J	NA	0	0	0	0	0	0	0
7	Diesel Tank O	Diesel	0	0	0	0	0	0	0
8	Base Oil Tank K	NA	0	0	0	0	0	0	0
42	Diesel Tank P	Diesel	0	0	0	0	0	0	0
43	Corrosion Inhibitor Storage Tank R	NA	0	0	0	0	0	0	0
44	Antifoam Storage Tank N	NA	0	0	0	0	0	0	0
45	Scale Inhibitor Storage Tank L	NA	0	0	0	0	0	0	0
46	Emulsion Breaker Storage Tank M	NA	0	0	0	0	0	0	0
51	Diesel Tank A	Diesel	0	0	0	0	0	0	0
52	Diesel Tank B	Diesel	0	0	0	0	0	0	0
53	Diesel Tank C	Diesel	0	0	0	0	0	0	0
54	Base Oil Tank D	NA	0	0	0	0	0	0	0
55	Base Oil Tank E	NA	0	0	0	0	0	0	0
56	Corrosion Inhibitor Tank F	NA	0	0	0	0	0	0	0
57	Scale Inhibitor Tank G	NA	0	0	0	0	0	0	0
58	Friction Reducer Tank H	NA	0	0	0	0	0	0	0
59	Future Chemical Tank I	NA	0	0	0	0	0	0	0
60	Contaminated Base Oil/Diesel Tank J	NA	0	0	0	0	0	0	0
61	Biocide Tank K	NA	0	0	0	0	0	0	0
62	Future Chemical Tank L	NA	0	0	0	0	0	0	0
63	Disposal Fluids Tank U	NA	0	0	0	0	0	0	0
119	Diesel Tank Q	Diesel	0	0	0	0	0	0	0
120	Diesel Dispensing Facility Tank 110	Diesel	0	0	0	0	0	0	0
121	Diesel Dispensing Facility Tank 120	Diesel	0	0	0	0	0	0	0
122	Diesel Dispensing Facility Tank 130	Diesel	0	0	0	0	0	0	0
Total			225.0	225.0	36.7	90.2	59.2	0.0	290,130.0
Total Assessable Emissions			636						

Notes:

¹ NREs and construction phase air emissions do not count towards stationary source classification, per 18 AAC 50.100 and

ADEC Policy and Procedure 04.02.104. Form Series D Instructions requires emissions from nonroad engines to not be included.

² HAP totals only include the non-VOC portion for each HAP in total amounts greater than 0.1 tons per year, per unit, as prescribed under Form Series D Instructions.

³ CO₂e includes the global warming potential for CO₂ (1), CH₄ (25), and N₂O (298).

⁴ HAP emissions are a subset of either VOC emissions or PM₁₀ emissions and are excluded from the assessable emissions total to avoid a double payment.

⁵ Assessable emission fees for GHGs have not been established under 18 AAC 50.

Table D-6. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TPV02
Stationary Source Emissions Summary - Significant Emission Units (Base Scenario)
Expected Actual Annual Emissions (After Controls/Limitations) - Hazardous Air Pollutants

Emission Unit			Annual Emissions (tpy) ¹																								
ID	Description	Fuel	1,3 Butadiene	Acetaldehyde	Acrolein	Benzene	Ethylbenzene	Formaldehyde	Hexane	Propylene Oxide	Toluene	Xylene	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	POM	Total		
Significant Emission Units																											
1	Gas Turbine #1	Fuel Gas	1.49E-04	0.01	0.002	0.004	0.01	0.3	0	0.01	0.05	0.02	0	0	0	0	0	0	0	0	0	0	0	0	7.81E-04	0.4	
2	Gas Turbine #2	Fuel Gas	1.35E-04	0.01	0.002	0.004	0.01	0.2	0	0.01	0.04	0.02	0	0	0	0	0	0	0	0	0	0	0	0	7.49E-04	0.3	
32	Dual Fuel Turbine #3	Fuel Gas	3.96E-05	0.004	0.0006	0.001	0.003	0.07	0	0.003	0.01	0.006	0	0	0	0	0	0	0	0	0	0	0	0	2.18E-04	0.1	
		Diesel	9.02E-06	0	0	4.06E-05	0	0.0002	0	0	0	0	8.13E-06	0	2.29E-07	2.29E-07	8.13E-06	0	1.03E-05	0.0006	8.87E-07	3.40E-06	1.85E-05	2.96E-05	0.0009		
33	Gas Turbine #4	Fuel Gas	1.42E-04	0.01	0.002	0.003	0.009	0.2	0	0.008	0.04	0.02	0	0	0	0	0	0	0	0	0	0	0	0	6.29E-04	0.3	
3	OPP Standby Generator - Reciprocating Engine	Diesel	0	1.21E-05	3.79E-06	0.0004	0	3.80E-05	0	0	0.0001	9.28E-05	0	0	0	0	0	0	0	0	0	0	0	0	1.02E-04	0.0008	
4	Daily Purge & Pilot Operation	Fuel Gas	0	0.0006	0.0001	0.002	0.02	0.02	0.0004	0	0.0008	0.0004	0	0	0	0	0	0	0	0	0	0	0	0	1.89E-04	0.04	
	Low Pressure Emergency Operation	Fuel Gas																									
70	OPP WIF Boiler #2	Diesel	0	0	0	0	0	0.0006	0	0	0	0	4.33E-06	0	3.25E-06	3.25E-06	3.25E-06	0	9.75E-06	6.50E-06	3.25E-06	3.25E-06	1.63E-05	2.98E-05	0.0015		
71	OPP WIF Boiler #3	Diesel	0	0	0	0	0	0.0005	0	0	0	0	4.29E-06	0	3.21E-06	3.21E-06	3.21E-06	0	9.64E-06	6.43E-06	3.21E-06	3.21E-06	1.61E-05	2.95E-05	0.0014		
78	Construction Power Generator #1 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
106	Standby Heater	Fuel Gas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
93	NOC Standby Generator - Reciprocating Engine	Diesel	0	6.07E-06	1.90E-06	0.0002	0	1.90E-05	0	0	6.76E-05	4.65E-05	0	0	0	0	0	0	0	0	0	0	0	0	5.10E-05	0.0004	
94	NOC Camp Boiler #1	Propane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
95	NOC Camp Boiler #2	Propane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
97	Construction Power Generator #2 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
111	NOC Warm Storage Boiler #1	Propane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
112	NOC Warm Storage Boiler #2	Propane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
118	Gasoline Dispensing Facility Tank 110	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	0	1.45E-05	4.53E-06	0.0004	0.00E+00	4.53E-05	0	0	0.0002	0.0001	0	0	0	0	0	0	0	0	0	0	0	0	0.0001	0.0009	
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	0	9.30E-06	2.91E-06	0.0003	0.00E+00	2.91E-05	0	0	0.0001	7.12E-05	0	0	0	0	0	0	0	0	0	0	0	0	7.82E-05	0.0006	
50	Fire Water Pump	Diesel	6.51E-07	1.47E-05	1.78E-06	1.79E-05	0.00E+00	2.27E-05	0	0	7.86E-06	5.48E-06	0	0	0	0	0	0	0	0	0	0	0	0	3.23E-06	7.43E-05	
108	Tent Heating Boiler #2	Diesel	0	0	0	0	0	0.003	0	0	0	0	1.99E-05	0	1.49E-05	1.49E-05	1.49E-05	0	4.47E-05	2.98E-05	1.49E-05	1.49E-05	7.46E-05	0.0001	4.45E-03		
109	SID WIF Boiler #1	Diesel	0	0	0	0	0	0.0005	0	0	0	0	4.15E-06	0	3.11E-06	3.11E-06	3.11E-06	0	9.33E-06	6.22E-06	3.11E-06	3.11E-06	1.56E-05	2.85E-05	0.0012		
110	SID WIF Boiler #2	Diesel	0	0	0	0	0	0.0005	0	0	0	0	4.15E-06	0	3.11E-06	3.11E-06	3.11E-06	0	9.33E-06	6.22E-06	3.11E-06	3.11E-06	1.56E-05	2.85E-05	0.0011		
114	Mud Tank Farm Boiler #1	Diesel	0	0	0	0	0	4.40E-05	0	0	0	0	3.47E-07	0	2.60E-07	2.60E-07	2.60E-07	0	7.60E-07	5.20E-07	2.60E-07	2.60E-07	1.30E-06	2.38E-06	2.32E-04		
115	Mud Tank Farm Boiler #2	Diesel	0	0	0	0	0	0.0001	0	0	0	0	1.16E-06	0	8.68E-07	8.68E-07	8.68E-07	0	2.61E-06	1.74E-06	8.68E-07	8.68E-07	4.34E-06	7.96E-06	0.0006		
64	SID WIF Generator Reciprocating Engine	Diesel	2.31E-07	0.0002	1.87E-05	0.0002	0	0.0002	0	0	8.28E-05	5.77E-05	0	0	0	0	0	0	0	0	0	0	0	0	3.40E-05	0.0008	
68	Cement Pump Engine #1	Diesel	3.07E-07	9.45E-06	1.14E-06	1.15E-05	0	1.45E-05	0	0	5.04E-06	3.51E-06	0	0	0	0	0	0	0	0	0	0	0	0	2.07E-06	4.75E-05	
116	Cement Pump Engine #2	Diesel	5.69E-07	9.45E-06	1.14E-06	1.15E-05	0	1.45E-05	0	0	5.04E-06	3.51E-06	0	0	0	0	0	0	0	0	0	0	0	0	2.07E-06	4.78E-05	
123	Construction Well Test Flare	Fuel Gas	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
9a	Rig Boiler #1	Diesel	5.17E-04	0	0	0	0	0.0006	0	0	0	0	4.72E-06	0	3.54E-06	3.54E-06	3.54E-06	0	1.06E-05	7.08E-06	3.54E-06	3.54E-06	1.77E-05	3.24E-05	0.0015		
10a	Rig Boiler #2	Diesel	5.17E-04	0	0	0	0	0.002	0	0	0	0	1.36E-05	0	1.02E-05	1.02E-05	1.02E-05	0	3.06E-05	2.04E-05	1.02E-05	1.02E-05	5.10E-05	0.0001	0.003		
11a	Air Heater	Diesel	6.49E-04	0	0	0	0	0.002	0	0	0	0	1.18E-05	0	8.87E-06	8.87E-06	8.87E-06	0	2.66E-05	1.77E-05	8.87E-06	8.87E-06	4.44E-05	8.13E-05	0.003		
12	Rig Heater #2	Diesel	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13	Rig Heater #3	Diesel	0.00E+00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
14	Rig Engine #1 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
15	Rig Engine #2 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
16	Rig Engine #3 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
17	Rig Engine #4 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
18	Coldstart Motors (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
74	Reciprocating Engine #1 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
75	Reciprocating Engine #2 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
98a	Rig Boiler #1	Diesel	0	0	0	0	0	0.003	0	0	0	0	2.05E-05	0	1.54E-05	1.54E-05	1.54E-05	0	4.61E-05	3.07E-05	1.54E-05	1.54E-05	7.68E-05	0.0001	0.005		
99a	Rig Boiler #2	Diesel	0	0	0	0	0	0.002	0	0	0	0	1.49E-05	0	1.12E-05	1.12E-05	1.12E-05	0	3.36E-05	2.24E-05	1.12E-05	1.12E-05	5.60E-05	0.0001	0.004		
100	Rig Heater #1	Diesel	0	0	0	0	0	0.004	0	0	0	0	3.44E-05	0	2.58E-05	2.58E-05	2.58E-05	0	7.73E-05	5.15E-05	2.58E-05	2.58E-05	0.0001	0.0002	0.007		
101	Rig Heater #2	Diesel	0	0	0	0	0	0.005	0	0	0	0	4.24E-05	0	3.18E-05	3.18E-05	3.18E-05	0	9.55E-05	6.37E-05	3.18E-05	3.18E-05	0.0002	0.0003	0.008		
102	Reciprocating Engine #1 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
103	Reciprocating Engine #2 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
104	Reciprocating Engine #3 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
105	Reciprocating Engine #4 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
117	Mud Pump #3 Coldstart (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
124	Reciprocating Engine #5 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
125	Reciprocating Engine #6 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
19	Peak Crane (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
20	Manitowoc Crane (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
23	Hot Oilier Boiler / Heater #1	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
24	Hot Oilier Boiler / Heater #2	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Insignificant Emission Units																											
NA	Condensate Tank S	Condensate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NA	WIF Bulk Rectangular Diesel Tank	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NA	WIF Boiler Diesel Fuel Tank	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
NA	Diesel Emergency Generator Engine Tank	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

Table D-6. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Significant Emission Units (Base Scenario)
Expected Actual Annual Emissions (After Controls/Limitations) - Hazardous Air Pollutants

Emission Unit			Annual Emissions (tpy) ¹																							
ID	Description	Fuel	1,3 Butadiene	Acetaldehyde	Acrolein	Benzene	Ethylbenzene	Formaldehyde	Hexane	Propylene Oxide	Toluene	Xylene	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	POM	Total	
43	Corrosion Inhibitor Storage Tank R	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
44	Antifoam Storage Tank N	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
45	Scale Inhibitor Storage Tank L	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
46	Emulsion Breaker Storage Tank M	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
51	Diesel Tank A	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
52	Diesel Tank B	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
53	Diesel Tank C	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
54	Base Oil Tank D	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
55	Base Oil Tank E	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
56	Corrosion Inhibitor Tank F	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
57	Scale Inhibitor Tank G	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
58	Friction Reducer Tank H	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
59	Future Chemical Tank I	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
60	Contaminated Base Oil/Diesel Tank J	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
61	Biocide Tank K	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
62	Future Chemical Tank L	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
63	Disposal Fluids Tank U	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
119	Diesel Tank Q	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
120	Diesel Dispensing Facility Tank 110	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
121	Diesel Dispensing Facility Tank 120	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
122	Diesel Dispensing Facility Tank 130	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total			0.0044	0.05	0.013	0.02	0.05	0.8	0.0004	0.03	0.1	0.07	0.0002	0	0.0001	0.0001	0.0001	0	0.0004	0.0009	0.0001	0.0001	0.0007	0.004	1.2	

Notes:
¹ NREs and construction phase air emissions do not count towards stationary source classification, per 18 AAC 50.100 and ADEC Policy and Procedure 04.02.104. Form Series D Instructions requires emissions from nonroad engines to not be included.

Table D-7. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TPV02
Stationary Source Emissions Summary - Base Scenario
Potential Annual Emissions (Before Controls/Limitations) - Hazardous Air Pollutants

Emission Unit			Annual Emissions (tpy) ¹																						
ID	Description	Fuel	1,3 Butadiene	Acetaldehyde	Acrolein	Benzene	Ethylbenzene	Formaldehyde	Hexane	Propylene Oxide	Toluene	Xylene	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	POM	Total
Significant Emission Units																									
1	Gas Turbine #1	Fuel Gas	0.0002	0.01	0.002	0.0044	0.01	0.3	0	0.01	0.05	0.02	0	0	0	0	0	0	0	0	0	0	0	0.0008	0.4
2	Gas Turbine #2	Fuel Gas	0.0002	0.01	0.002	0.0044	0.01	0.3	0	0.01	0.05	0.02	0	0	0	0	0	0	0	0	0	0	0	0.0008	0.4
32	Dual Fuel Turbine #3 ²	Fuel Gas	0.005	0.01	0.002	0.02	0.01	0.3	0	0.01	0.05	0.02	0.004	0	0.0001	0.0001	0.0037	0	0.005	0.3	0.0004	0.002	0.009	0.01	0.7
33	Gas Turbine #4	Fuel Gas	0.0002	0.015	0.002	0.004	0.01	0.3	0	0.01	0.05	0.02	0	0	0	0	0	0	0	0	0	0	0	0.0008	0.4
3	OPP Standby Generator - Reciprocating Engine	Diesel	0	0.003	0.0008	0.08	0	0.008	0	0.03	0.02	0.02	0	0	0	0	0	0	0	0	0	0	0	0.02	0.2
4	Daily Purge & Pilot Operation	Fuel Gas	0	0.003	0.0007	0.01	0.095	0.08	0.002	0	0.004	0.002	0	0	0	0	0	0	0	0	0	0	0	0.0009	0.2
	Low Pressure Emergency Operation	Fuel Gas	0	0.06	0.01	0.2	1.950	1.6	0.04	0	0.08	0.04	0	0	0	0	0	0	0	0	0	0	0	0.02	4.0
70	OPP WIF Boiler #2	Diesel	0	0	0	0	0	0.002	0	0	0	0	1.64E-05	0	1.23E-05	1.23E-05	1.23E-05	0	3.69E-05	2.46E-05	1.23E-05	1.23E-05	6.14E-05	0.0001	0.033
71	OPP WIF Boiler #3	Diesel	0	0	0	0	0	0.002	0	0	0	0	1.64E-05	0	1.23E-05	1.23E-05	1.23E-05	0	3.69E-05	2.46E-05	1.23E-05	1.23E-05	6.14E-05	0.0001	0.033
78	Construction Power Generator #1 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	0	0	0	8.56E-05	0	0.003	0	0	0.0001	0	8.15E-06	0.0002	4.91E-07	4.89E-07	5.71E-05	3.42E-06	0	1.55E-05	1.06E-05	8.56E-05	9.79E-07	0.003	0.007
93	NOC Standby Generator - Reciprocating Engine	Diesel	0	0.001	0.0004	0.04	0	0.004	0	0	0.01	0.009	0	0	0	0	0	0	0	0	0	0	0	0.01	0.07
94	NOC Camp Boiler #1	Propane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	NOC Camp Boiler #2	Propane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97	Construction Power Generator #2 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112	NOC Warm Storage Boiler #2	Propane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
118	Gasoline Dispensing Facility Tank 110	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	0	0.003	0.0008	0.08	0	0.008	0	0	0.03	0.02	0	0	0	0	0	0	0	0	0	0	0	0.02	0.2
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	0	0.003	0.0009	0.09	0	0.009	0	0	0.03	0.02	0	0	0	0	0	0	0	0	0	0	0	0.02	0.2
50	Fire Water Pump	Diesel	0.0002	0.004	0.0005	0.005	0	0.007	0	0	0.002	0.002	0	0	0	0	0	0	0	0	0	0	0	0.0009	0.02
63	Disposal Fluids Tank U	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	Tent Heating Boiler #2	Diesel	0	0	0	0	0	0.005	0	0	0	0	4.26E-05	0	3.19E-05	3.19E-05	3.19E-05	0	9.58E-05	6.39E-05	3.19E-05	3.19E-05	0.0002	0.0003	0.087
109	SID WIF Boiler #1	Diesel	0	0	0	0	0	0.004	0	0	0	0	3.03E-05	0	2.27E-05	2.27E-05	2.27E-05	0	6.82E-05	4.55E-05	2.27E-05	2.27E-05	0.0001	0.0002	0.062
110	SID WIF Boiler #2	Diesel	0	0	0	0	0	0.004	0	0	0	0	3.03E-05	0	2.27E-05	2.27E-05	2.27E-05	0	6.82E-05	4.55E-05	2.27E-05	2.27E-05	0.0001	0.0002	0.062
114	Mud Tank Farm Boiler #1	Diesel	0	0	0	0	0	0.001	0	0	0	0	1.14E-05	0	8.53E-06	8.53E-06	8.53E-06	0	2.56E-05	1.71E-05	8.53E-06	8.53E-06	4.26E-05	7.82E-05	0.023
115	Mud Tank Farm Boiler #2	Diesel	0	0	0	0	0	0.001	0	0	0	0	1.14E-05	0	8.53E-06	8.53E-06	8.53E-06	0	2.56E-05	1.71E-05	8.53E-06	8.53E-06	4.26E-05	7.82E-05	0.023
64	SID WIF Generator Reciprocating Engine	Diesel	0.0005	0.01	0.001	0.01	0	0.02	0	0	0.005	0.004	0	0	0	0	0	0	0	0	0	0	0	0.002	0.05
68	Cement Pump Engine #1	Diesel	0.0004	0.008	0.0009	0.009	0	0.01	0	0	0.004	0.003	0	0	0	0	0	0	0	0	0	0	0	0.002	0.04
116	Cement Pump Engine #2	Diesel	0.0004	0.008	0.0009	0.009	0	0.01	0	0	0.004	0.003	0	0	0	0	0	0	0	0	0	0	0	0.002	0.04
123	Construction Well Test Flare	Fuel Gas	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	0	0	0	0	0	0.007	0	0	0	0	5.87E-05	0	4.40E-05	4.40E-05	4.40E-05	0	0.0001	0.0001	4.40E-05	4.40E-05	0.0002	0.0004	0.12
10a	Rig Boiler #2	Diesel	0	0	0	0	0	0.007	0	0	0	0	5.87E-05	0	4.40E-05	4.40E-05	4.40E-05	0	0.0001	0.0001	4.40E-05	4.40E-05	0.0002	0.0004	0.12
11a	Air Heater	Diesel	0	0	0	0	0	0.009	0	0	0	0	7.36E-05	0	5.52E-05	5.52E-05	5.52E-05	0	0.0002	0.0001	5.52E-05	5.52E-05	0.0003	0.0005	0.15
12	Rig Heater #2	Diesel	0	0	0	0	0	0.009	0	0	0	0	7.36E-05	0	5.52E-05	5.52E-05	5.52E-05	0	0.0002	0.0001	5.52E-05	5.52E-05	0.0003	0.0005	0.15
13	Rig Heater #3	Diesel	0	0	0	0	0	0.006	0	0	0	0	4.38E-05	0	3.29E-05	3.29E-05	3.29E-05	0	9.86E-05	6.57E-05	3.29E-05	3.29E-05	0.0002	0.0003	0.089
14	Rig Engine #1 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	0	0	0	0	0	0.007	0	0	0	0	5.78E-05	0	4.34E-05	4.34E-05	4.34E-05	0	0.0001	0.0001	4.34E-05	4.34E-05	0.0002	0.0004	0.12
99a	Rig Boiler #2	Diesel	0	0	0	0	0	0.007	0	0	0	0	5.78E-05	0	4.34E-05	4.34E-05	4.34E-05	0	0.0001	0.0001	4.34E-05	4.34E-05	0.0002	0.0004	0.12
100	Rig Heater #1	Diesel	0	0	0	0	0	0.008	0	0	0	0	6.13E-05	0	4.60E-05	4.60E-05	4.60E-05	0	0.0001	9.20E-05	4.60E-05	4.60E-05	0.0002	0.0004	0.125
101	Rig Heater #2	Diesel	0	0	0	0	0	0.01	0	0	0	0	8.76E-05	0	6.57E-05	6.57E-05	6.57E-05	0	0.0002	0.0001	6.57E-05	6.57E-05	0.0003	0.0006	0.18
102	Reciprocating Engine #1 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	0	0	0	0	0	0.01	0	0	0	0	0.0001	0	7.88E-05	7.88E-05	7.88E-05	0	0.0002	0.0002	7.88E-05	7.88E-05	0.0004	0.0007	0.21
24	Hot Oilier Boiler / Heater #2	Diesel	0	0	0	0	0	0.02	0	0	0	0	0.0002	0	0.0001	0.0001	0.0001	0	0.0004	0.0002	0.0001	0.0001	0.0006	0.001	0.34
Insignificant Emission Units																									
NA	Condensate Tank S	Condensate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA	WIF Bulk Rectangular Diesel Tank	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA	WIF Boiler Diesel Fuel Tank	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA	Diesel Emergency Generator Engine Tank	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NA	WIF Storage Tank	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0</		

Table D-7. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Potential Annual Emissions (Before Controls/Limitations) - Hazardous Air Pollutants

Emission Unit			Annual Emissions (tpy) ¹																							
ID	Description	Fuel	1,3 Butadiene	Acetaldehyde	Acrolein	Benzene	Ethylbenzene	Formaldehyde	Hexane	Propylene Oxide	Toluene	Xylene	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	POM	Total	
43	Corrosion Inhibitor Storage Tank R	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
44	Antifoam Storage Tank N	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
45	Scale Inhibitor Storage Tank L	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
46	Emulsion Breaker Storage Tank M	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
51	Diesel Tank A	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
52	Diesel Tank B	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
53	Diesel Tank C	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
54	Base Oil Tank D	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
55	Base Oil Tank E	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
56	Corrosion Inhibitor Tank F	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
57	Scale Inhibitor Tank G	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
58	Friction Reducer Tank H	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
59	Future Chemical Tank I	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
60	Contaminated Base Oil/Diesel Tank J	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
61	Biocide Tank K	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
62	Future Chemical Tank L	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
119	Diesel Tank Q	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
120	Diesel Dispensing Facility Tank 110	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
121	Diesel Dispensing Facility Tank 120	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
122	Diesel Dispensing Facility Tank 130	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total			0.046	1.1	0.95	0.6	2.1	2.9	0.05	0.04	0.4	0.2	0.005	0.0002	0.0009	0.0009	0.005	0.000003	0.007	0.3	0.001	0.002	0.01	0.1	8.8	

Notes:
¹ NREs and construction phase air emissions do not count towards stationary source classification, per 18 AAC 50.100 and ADEC Policy and Procedure 04.02.104. Form Series D Instructions requires emissions from nonroad engines to not be included.
² Worst case emissions estimated for fuel gas or diesel use.

Table D-8. Eni US Operating Co. Inc. - Nikaitchuk Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Potential Annual Emissions (After Controls/Limitations) - Hazardous Air Pollutants

Emission Unit			Annual Emissions (tpy) ¹																						
ID	Description	Fuel	1,3 Butadiene	Acetaldehyde	Acrolein	Benzene	Ethylbenzene	Formaldehyde	Hexane	Propylene Oxide	Toluene	Xylene	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	POM	Total
Significant Emission Units																									
1	Gas Turbine #1	Fuel Gas	0.0002	0.01	0.002	0.004	0.01	0.3	0	0.01	0.05	0.02	0	0	0	0	0	0	0	0	0	0	0	0.0008	0.4
2	Gas Turbine #2	Fuel Gas	0.0002	0.01	0.002	0.004	0.01	0.3	0	0.01	0.05	0.02	0	0	0	0	0	0	0	0	0	0	0	0.0008	0.4
32	Dual Fuel Turbine #3 ²	Fuel Gas	0.0001	0.01	0.002	0.004	0.01	0.2	0	0.010	0.04	0.02	0	0	0	0	0	0	0	0	0	0	0	0.0007	0.3
		Diesel	0.0004	0	0	0.001	0	0.007	0	0	0	0	0.0003	0	7.23E-06	7.23E-06	0.0003	0	0.0003	0.02	2.80E-05	0.0001	0.0006	0.0009	0.03
33	Gas Turbine #4	Fuel Gas	0.0002	0.01	0.002	0.004	0.01	0.3	0	0.01	0.05	0.02	0	0	0	0	0	0	0	0	0	0	0	0.0008	0.4
3	OPP Standby Generator - Reciprocating Engine	Diesel	0	0.0006	0.0002	0.02	0	0.002	0	0	0.007	0.005	0	0	0	0	0	0	0	0	0	0	0	0.0050	0.04
4	Daily Purge & Pilot Operation	Fuel Gas	0	0.003	0.0007	0.01	0.09	0.08	1.91E-03	0	0.004	0.002	0	0	0	0	0	0	0	0	0	0	0	0.0009	0.2
	Low Pressure Emergency Operation	Fuel Gas	0	0.002	0.0005	0.008	0.07	0.06	1.41E-03	0	0.003	0.001	0	0	0	0	0	0	0	0	0	0	0	0.0007	0.1
70	OPP WIF Boiler #2	Diesel	0	0	0	0	0	0.002	0	0	0	0	1.64E-05	0	1.23E-05	1.23E-05	1.23E-05	0	3.69E-05	2.46E-05	1.23E-05	1.23E-05	6.14E-05	0.0001	0.033
71	OPP WIF Boiler #3	Diesel	0	0	0	0	0	0.002	0	0	0	0	1.64E-05	0	1.23E-05	1.23E-05	1.23E-05	0	3.69E-05	2.46E-05	1.23E-05	1.23E-05	6.14E-05	0.0001	0.033
78	Construction Power Generator #1 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	0	0	0	8.56E-05	0	0.003	0	0	0.0001	0	8.15E-06	0.0002	4.91E-07	4.89E-07	5.71E-05	3.42E-06	0.00E+00	1.55E-05	1.06E-05	8.56E-05	9.79E-07	0.003	0.007
93	NOC Standby Generator - Reciprocating Engine	Diesel	0	6.59E-05	2.06E-05	0.002	0	0.0002	0	0	0.0007	0.0005	0	0	0	0	0	0	0	0	0	0	0	0.0006	0.004
94	NOC Camp Boiler #1	Propane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	NOC Camp Boiler #2	Propane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97	Construction Power Generator #2 (NRE)	Diesel	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112	NOC Warm Storage Boiler #2	Propane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
118	Gasoline Dispensing Facility Tank 110	Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	Diesel Dispensing Facility Tank 110	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
121	Diesel Dispensing Facility Tank 120	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
122	Diesel Dispensing Facility Tank 130	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	0	0.003	0.0008	0.08	0	0.008	0	0	0.03	0.02	0	0	0	0	0	0	0	0	0	0	0	0.02	0.2
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	0	0.0006	0.0002	0.02	0	0.002	0	0	0.007	0.005	0	0	0	0	0	0	0	0	0	0	0	0.005	0.04
50	Fire Water Pump	Diesel	2.50E-06	4.91E-05	5.92E-06	5.98E-05	0	7.56E-05	0	0	2.62E-05	1.83E-05	0	0	0	0	0	0	0	0	0	0	0	1.08E-05	0.0002
108	Tent Heating Boiler #2	Diesel	0	0	0	0	0	0.005	0	0	0	0	4.26E-05	0	3.19E-05	3.19E-05	3.19E-05	0	9.58E-05	6.39E-05	3.19E-05	3.19E-05	0.0002	0.0003	0.087
109	SID WIF Boiler #1	Diesel	0	0	0	0	0	0.004	0	0	0	0	3.03E-05	0	2.27E-05	2.27E-05	2.27E-05	0	6.82E-05	4.55E-05	2.27E-05	2.27E-05	0.0001	0.0002	0.062
110	SID WIF Boiler #2	Diesel	0	0	0	0	0	0.004	0	0	0	0	3.03E-05	0	2.27E-05	2.27E-05	2.27E-05	0	6.82E-05	4.55E-05	2.27E-05	2.27E-05	0.0001	0.0002	0.062
114	Mud Tank Farm Boiler #1	Diesel	0	0	0	0	0	0.001	0	0	0	0	1.14E-05	0	8.53E-06	8.53E-06	8.53E-06	0	2.56E-05	1.71E-05	8.53E-06	8.53E-06	4.26E-05	7.82E-05	0.023
115	Mud Tank Farm Boiler #2	Diesel	0	0	0	0	0	0.001	0	0	0	0	1.14E-05	0	8.53E-06	8.53E-06	8.53E-06	0	2.56E-05	1.71E-05	8.53E-06	8.53E-06	4.26E-05	7.82E-05	0.023
64	SID WIF Generator Reciprocating Engine	Diesel	0.0005	0.010	0.001	0.01	0	0.02	0	0	0.005	0.004	0	0	0	0	0	0	0	0	0	0	0	0.002	0.05
68	Cement Pump Engine #1	Diesel	0.0004	0.008	0.0009	0.009	0	0.01	0	0	0.004	0.003	0	0	0	0	0	0	0	0	0	0	0	0.002	0.04
116	Cement Pump Engine #2	Diesel	0.0004	0.008	0.0009	0.009	0	0.01	0	0	0.004	0.003	0	0	0	0	0	0	0	0	0	0	0	0.002	0.04
123	Construction Well Test Flare	Fuel Gas	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	0	0	0	0	0	0.007	0	0	0	0	5.87E-05	0	4.40E-05	4.40E-05	4.40E-05	0	0.0001	0.0001	4.40E-05	4.40E-05	0.0002	0.0004	0.12
10a	Rig Boiler #2	Diesel	0	0	0	0	0	0.007	0	0	0	0	5.87E-05	0	4.40E-05	4.40E-05	4.40E-05	0	0.0001	0.0001	4.40E-05	4.40E-05	0.0002	0.0004	0.12
11a	Air Heater	Diesel	0	0	0	0	0	0.009	0	0	0	0	7.36E-05	0	5.52E-05	5.52E-05	5.52E-05	0	0.0002	0.0001	5.52E-05	5.52E-05	0.0003	0.0005	0.15
12	Rig Heater #2	Diesel	0	0	0	0	0	0.009	0	0	0	0	7.36E-05	0	5.52E-05	5.52E-05	5.52E-05	0	0.0002	0.0001	5.52E-05	5.52E-05	0.0003	0.0005	0.15
13	Rig Heater #3	Diesel	0	0	0	0	0	0.006	0	0	0	0	4.38E-05	0	3.29E-05	3.29E-05	3.29E-05	0	9.86E-05	6.57E-05	3.29E-05	3.29E-05	0.0002	0.0003	0.09
14	Rig Engine #																								

Table D-8. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Potential Annual Emissions (After Controls/Limitations) - Hazardous Air Pollutants

Emission Unit			Annual Emissions (tpy) ¹																							
ID	Description	Fuel	1,3 Butadiene	Acetaldehyde	Acrolein	Benzene	Ethylbenzene	Formaldehyde	Hexane	Propylene Oxide	Toluene	Xylene	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	POM	Total	
8	Base Oil Tank K	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
42	Diesel Tank P	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
43	Corrosion Inhibitor Storage Tank R	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
44	Antifoam Storage Tank N	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
45	Scale Inhibitor Storage Tank L	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
46	Emulsion Breaker Storage Tank M	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
51	Diesel Tank A	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
52	Diesel Tank B	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
53	Diesel Tank C	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
54	Base Oil Tank D	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
55	Base Oil Tank E	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
56	Corrosion Inhibitor Tank F	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
57	Scale Inhibitor Tank G	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
58	Friction Reducer Tank H	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
59	Future Chemical Tank I	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
60	Contaminated Base Oil/Diesel Tank J	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
61	Biocide Tank K	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
62	Future Chemical Tank L	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
63	Disposal Fluids Tank U	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
119	Diesel Tank Q	Diesel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total			0.032	0.80	0.72	0.2	0.2	1.3	0.010	0.04	0.3	0.1	0.001	0.0002	0.0006	0.0006	0.001	0.000003	0.002	0.02	0.001	0.001	0.003	0.05	3.8	

Notes:
¹ NREs and construction phase air emissions do not count towards stationary source classification, per 18 AAC 50.100 and ADEC Policy and Procedure 04.02.104. Form Series D Instructions requires emissions from nonroad engines to not be included.
² Worst case emissions estimated for fuel gas or diesel use.

Table D-9. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TP02
Stationary Source Emissions Summary - Base Scenario
Expected Actual Annual Emissions (After Controls/Limitations) - Carbon Dioxide Equivalent

Emission Unit				Greenhouse Gas			CO ₂ e Annual Emissions ¹
ID	Description	Fuel	Rating/Size	CO ₂	CH ₄	N ₂ O	
Significant Emission Units							
1	Gas Turbine #1	Fuel Gas	8.25 MW	46,204 tpy	2.3 tpy	0.5 tpy	46,402 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	44,302 tpy	2.3 tpy	0.5 tpy	44,492 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	12,860 tpy	0.7 tpy	0.1 tpy	12,915 tpy
		Diesel	7.70 MW	120 tpy	0.005 tpy	0.001 tpy	121 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	37,197 tpy	1.9 tpy	0.4 tpy	37,357 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	78 tpy	0.003 tpy	0.0006 tpy	79 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	1,981 tpy	0.1 tpy	0.02 tpy	1,989 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day				
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	221 tpy	0.009 tpy	0.002 tpy	222 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	218 tpy	0.009 tpy	0.002 tpy	219 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	0 tpy	0 tpy	0 tpy	0 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	39 tpy	0.002 tpy	0.0003 tpy	39 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	13 tpy	0.0006 tpy	0.0006 tpy	13 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	12 tpy	0.0006 tpy	0.0006 tpy	12 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	347 tpy	0.02 tpy	0.02 tpy	352 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	347 tpy	0.02 tpy	0.02 tpy	352 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	94 tpy	0.004 tpy	0.0008 tpy	94 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	60 tpy	0.002 tpy	0.0005 tpy	60 tpy
50	Fire Water Pump	Diesel	183 bhp	3 tpy	0.0001 tpy	2.54E-05 tpy	3 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	1,013 tpy	0.04 tpy	0.008 tpy	1,017 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	211 tpy	0.009 tpy	0.002 tpy	212 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	211 tpy	0.009 tpy	0.002 tpy	212 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.65 MMBtu/hr	18 tpy	0.0007 tpy	0.0001 tpy	18 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.65 MMBtu/hr	59 tpy	0.002 tpy	0.0005 tpy	59 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	33 tpy	0.001 tpy	0.0003 tpy	33 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	2 tpy	8.15E-05 tpy	1.63E-05 tpy	2 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	2 tpy	8.15E-05 tpy	1.63E-05 tpy	2 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	240 tpy	0.01 tpy	0.002 tpy	241 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	692 tpy	0.03 tpy	0.006 tpy	695 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	603 tpy	0.02 tpy	0.005 tpy	605 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	0 tpy	0 tpy	0 tpy	0 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	0 tpy	0 tpy	0 tpy	0 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---
98a	Rig Boiler #1	Diesel	3,300 MMBtu/hr	1,044 tpy	0.04 tpy	0.01 tpy	1,048 tpy
99a	Rig Boiler #2	Diesel	3,300 MMBtu/hr	760 tpy	0.03 tpy	0.006 tpy	763 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	1,751 tpy	0.07 tpy	0.01 tpy	1,757 tpy
101	Rig Heater #2	Diesel	5.0 MMBtu/hr	2,162 tpy	0.09 tpy	0.02 tpy	2,170 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	0 tpy	0 tpy	0 tpy	0 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	0 tpy	0 tpy	0 tpy	0 tpy

Table D-9. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TP02
Stationary Source Emissions Summary - Base Scenario
Expected Actual Annual Emissions (After Controls/Limitations) - Carbon Dioxide Equivalent

Emission Unit			Greenhouse Gas			CO ₂ e Annual Emissions ¹	
ID	Description	Fuel	Rating/Size	CO ₂	CH ₄	N ₂ O	
Insignificant Emission Units							
NA	Condensate Tank S	Condensate	1,176 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	0 tpy	0 tpy	0 tpy	0 tpy
5	Slop Oil Tank A	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
6	Slop Oil Tank B	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
34	Slop Oil Tank C	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
35	Slop Oil Tank D	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
36	Slop Oil Tank E	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
37	Slop Oil Tank F	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
38	Slop Oil Tank G	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
39	Slop Oil Tank H	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
40	Slop Oil Tank I	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
41	Slop Oil Tank J	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
7	Diesel Tank Q	Diesel	600 bbls	0 tpy	0 tpy	0 tpy	0 tpy
8	Base Oil Tank K	NA	400 bbls	0 tpy	0 tpy	0 tpy	0 tpy
42	Diesel Tank P	Diesel	600 bbls	0 tpy	0 tpy	0 tpy	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	0 tpy	0 tpy	0 tpy	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	0 tpy	0 tpy	0 tpy	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	0 tpy	0 tpy	0 tpy	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	0 tpy	0 tpy	0 tpy	0 tpy
51	Diesel Tank A	Diesel	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
52	Diesel Tank B	Diesel	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
53	Diesel Tank C	Diesel	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
54	Base Oil Tank D	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
55	Base Oil Tank E	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	0 tpy	0 tpy	0 tpy	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
59	Future Chemical Tank I	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	0 tpy	0 tpy	0 tpy	0 tpy
61	Biocide Tank K	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
62	Future Chemical Tank L	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	0 tpy	0 tpy	0 tpy	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	0 tpy	0 tpy	0 tpy	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
Total Expected Actual Annual Emissions (After Controls/Limitations) - Carbon Dioxide Equivalent							153,555 tpy

Notes:

¹ Global Warming Potential (Table A-1, 40 CFR 98) applied for each pollutant.

Name	GWP
CO ₂	1
CH ₄	25
N ₂ O	298

**Table D-10. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Potential Annual Emissions (Before Controls/Limitations) - Carbon Dioxide Equivalent**

Emission Unit				Greenhouse Gas			CO ₂ e Annual
ID	Description	Fuel	Rating/Size	CO ₂	CH ₄	N ₂ O	Emissions ¹
Significant Emission Units							
1	Gas Turbine #1	Fuel Gas	8.25 MW	47,472 tpy	2.4 tpy	0.5 tpy	47,676 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	47,472 tpy	2.4 tpy	0.5 tpy	47,676 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	55,541 tpy ²	2.4 tpy ²	0.5 tpy ²	55,746 tpy ²
		Diesel	7.70 MW				
33	Gas Turbine #4	Fuel Gas	8.25 MW	47,472 tpy	2.4 tpy	0.5 tpy	47,676 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	16,760 tpy	0.7 tpy	0.1 tpy	16,817 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	9,640 tpy	0.5 tpy	0.1 tpy	9,681 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	198,148 tpy	10.1 tpy	2.0 tpy	199,000 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	835 tpy	0.03 tpy	0.007 tpy	838 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	835 tpy	0.03 tpy	0.007 tpy	838 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	7,478 tpy	0.4 tpy	0.08 tpy	7,510 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	7,474 tpy	0.3 tpy	0.06 tpy	7,499 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	1,484 tpy	0.07 tpy	0.07 tpy	1,507 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	1,484 tpy	0.07 tpy	0.07 tpy	1,507 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	694 tpy	0.03 tpy	0.034 tpy	705 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	694 tpy	0.03 tpy	0.034 tpy	705 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	16,752 tpy	0.7 tpy	0.1 tpy	16,810 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	18,172 tpy	0.7 tpy	0.1 tpy	18,235 tpy
50	Fire Water Pump	Diesel	183 bhp	915 tpy	0.04 tpy	0.007 tpy	918 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	2,169 tpy	0.1 tpy	0.02 tpy	2,177 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	1,544 tpy	0.1 tpy	0.01 tpy	1,550 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	1,544 tpy	0.1 tpy	0.01 tpy	1,550 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.65 MMBtu/hr	579 tpy	0.02 tpy	0.005 tpy	581 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.65 MMBtu/hr	579 tpy	0.02 tpy	0.005 tpy	581 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	2,110 tpy	0.09 tpy	0.02 tpy	2,117 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	1,600 tpy	0.06 tpy	0.01 tpy	1,605 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	1,600 tpy	0.06 tpy	0.01 tpy	1,605 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	2,991 tpy	0.1 tpy	0.02 tpy	3,001 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	2,991 tpy	0.1 tpy	0.02 tpy	3,001 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	3,749 tpy	0.2 tpy	0.03 tpy	3,762 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	3,749 tpy	0.2 tpy	0.03 tpy	3,762 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	2,232 tpy	0.1 tpy	0.02 tpy	2,239 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	2,946 tpy	0.1 tpy	0.02 tpy	2,956 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	2,946 tpy	0.1 tpy	0.02 tpy	2,956 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	3,125 tpy	0.1 tpy	0.03 tpy	3,135 tpy
101	Rig Heater #2	Diesel	5.0 MMBtu/hr	4,464 tpy	0.2 tpy	0.04 tpy	4,479 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---
23	Hot Oiler Boiler / Heater #1	Diesel	6 MMBtu/hr	5,356 tpy	0.2 tpy	0.04 tpy	5,375 tpy
24	Hot Oiler Boiler / Heater #2	Diesel	9.5 MMBtu/hr	8,481 tpy	0.3 tpy	0.07 tpy	8,510 tpy
Insignificant Emission Units							
NA	Condensate Tank S	Condensate	1,176 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	0 tpy	0 tpy	0 tpy	0 tpy

**Table D-10. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Potential Annual Emissions (Before Controls/Limitations) - Carbon Dioxide Equivalent**

Emission Unit				Greenhouse Gas			CO ₂ e Annual Emissions ¹
ID	Description	Fuel	Rating/Size	CO ₂	CH ₄	N ₂ O	
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	0 tpy	0 tpy	0 tpy	0 tpy
5	Slop Oil Tank A	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
6	Slop Oil Tank B	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
34	Slop Oil Tank C	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
35	Slop Oil Tank D	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
36	Slop Oil Tank E	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
37	Slop Oil Tank F	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
38	Slop Oil Tank G	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
39	Slop Oil Tank H	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
40	Slop Oil Tank I	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
41	Slop Oil Tank J	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
7	Diesel Tank O	Diesel	600 bbls	0 tpy	0 tpy	0 tpy	0 tpy
8	Base Oil Tank K	NA	400 bbls	0 tpy	0 tpy	0 tpy	0 tpy
42	Diesel Tank P	Diesel	600 bbls	0 tpy	0 tpy	0 tpy	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	0 tpy	0 tpy	0 tpy	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	0 tpy	0 tpy	0 tpy	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	0 tpy	0 tpy	0 tpy	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	0 tpy	0 tpy	0 tpy	0 tpy
51	Diesel Tank A	Diesel	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
52	Diesel Tank B	Diesel	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
53	Diesel Tank C	Diesel	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
54	Base Oil Tank D	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
55	Base Oil Tank E	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	0 tpy	0 tpy	0 tpy	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
59	Future Chemical Tank I	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	0 tpy	0 tpy	0 tpy	0 tpy
61	Biocide Tank K	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
62	Future Chemical Tank L	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	0 tpy	0 tpy	0 tpy	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	0 tpy	0 tpy	0 tpy	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
Total Potential Annual Emissions (Before Controls/Limitations) - Carbon Dioxide Equivalent							536,285 tpy

Notes:

¹ Global Warming Potential (Table A-1, 40 CFR 98) applied for each pollutant.

Name	GWP
CO ₂	1
CH ₄	25
N ₂ O	298

² Worst case emissions estimated for fuel gas or diesel use.

**Table D-11. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Potential Annual Emissions (After Controls/Limitations) - Carbon Dioxide Equivalent**

Emission Unit				Greenhouse Gas			CO ₂ e Annual Emissions ¹
ID	Description	Fuel	Rating/Size	CO ₂	CH ₄	N ₂ O	
Significant Emission Units							
1	Gas Turbine #1	Fuel Gas	8.25 MW	47,472 tpy	2.4 tpy	0.5 tpy	47,676 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	47,472 tpy	2.4 tpy	0.5 tpy	47,676 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	44,220 tpy	2.2 tpy	0.4 tpy	44,410 tpy
		Diesel	7.70 MW	3,804 tpy	0.2 tpy	0.03 tpy	3,817 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	47,472 tpy	2.4 tpy	0.5 tpy	47,676 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	3,826 tpy	0.2 tpy	0.03 tpy	3,840 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	9,640 tpy	0.5 tpy	0.1 tpy	9,681 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	7,153 tpy	0.4 tpy	0.07 tpy	7,183 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	835 tpy	0.03 tpy	0.007 tpy	838 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	835 tpy	0.03 tpy	0.007 tpy	838 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	7,478 tpy	0.4 tpy	0.08 tpy	7,510 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	427 tpy	0.02 tpy	0.003 tpy	428 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	1,484 tpy	0.07 tpy	0.07 tpy	1,507 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	1,484 tpy	0.07 tpy	0.07 tpy	1,507 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	694 tpy	0.03 tpy	0.034 tpy	705 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	694 tpy	0.03 tpy	0.034 tpy	705 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	16,752 tpy	0.7 tpy	0.1 tpy	16,810 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	4,149 tpy	0.2 tpy	0.03 tpy	4,163 tpy
50	Fire Water Pump	Diesel	183 bhp	10 tpy	0.0004 tpy	8.47E-05 tpy	10 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	2,169 tpy	0.09 tpy	0.02 tpy	2,177 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	1,544 tpy	0.06 tpy	0.01 tpy	1,550 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	1,544 tpy	0.06 tpy	0.01 tpy	1,550 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.65 MMBtu/hr	579 tpy	0.02 tpy	0.005 tpy	581 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.65 MMBtu/hr	579 tpy	0.02 tpy	0.005 tpy	581 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	2,110 tpy	0.09 tpy	0.02 tpy	2,117 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	1,600 tpy	0.06 tpy	0.01 tpy	1,605 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	1,600 tpy	0.06 tpy	0.01 tpy	1,605 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	2,991 tpy	0.1 tpy	0.02 tpy	3,001 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	2,991 tpy	0.1 tpy	0.02 tpy	3,001 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	3,749 tpy	0.2 tpy	0.03 tpy	3,762 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	3,749 tpy	0.2 tpy	0.03 tpy	3,762 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	2,232 tpy	0.09 tpy	0.02 tpy	2,239 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	2,946 tpy	0.1 tpy	0.02 tpy	2,956 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	2,946 tpy	0.1 tpy	0.02 tpy	2,956 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	3,125 tpy	0.1 tpy	0.03 tpy	3,135 tpy
101	Rig Heater #2	Diesel	5.0 MMBtu/hr	4,464 tpy	0.2 tpy	0.04 tpy	4,479 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---
23	Hot Oiler Boiler / Heater #1	Diesel	6 MMBtu/hr	807 tpy	0.03 tpy	0.007 tpy	810 tpy
24	Hot Oiler Boiler / Heater #2	Diesel	9.5 MMBtu/hr	1,278 tpy	0.05 tpy	0.01 tpy	1,282 tpy
Insignificant Emssion Units							
NA	Condensate Tank S	Condensate	1,176 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	0 tpy	0 tpy	0 tpy	0 tpy

Table D-11. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Potential Annual Emissions (After Controls/Limitations) - Carbon Dioxide Equivalent

Emission Unit				Greenhouse Gas			CO ₂ e Annual Emissions ¹
ID	Description	Fuel	Rating/Size	CO ₂	CH ₄	N ₂ O	
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	0 tpy	0 tpy	0 tpy	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	0 tpy	0 tpy	0 tpy	0 tpy
5	Slop Oil Tank A	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
6	Slop Oil Tank B	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
34	Slop Oil Tank C	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
35	Slop Oil Tank D	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
36	Slop Oil Tank E	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
37	Slop Oil Tank F	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
38	Slop Oil Tank G	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
39	Slop Oil Tank H	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
40	Slop Oil Tank I	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
41	Slop Oil Tank J	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
7	Diesel Tank O	Diesel	600 bbls	0 tpy	0 tpy	0 tpy	0 tpy
8	Base Oil Tank K	NA	400 bbls	0 tpy	0 tpy	0 tpy	0 tpy
42	Diesel Tank P	Diesel	600 bbls	0 tpy	0 tpy	0 tpy	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	0 tpy	0 tpy	0 tpy	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	0 tpy	0 tpy	0 tpy	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	0 tpy	0 tpy	0 tpy	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	0 tpy	0 tpy	0 tpy	0 tpy
51	Diesel Tank A	Diesel	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
52	Diesel Tank B	Diesel	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
53	Diesel Tank C	Diesel	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
54	Base Oil Tank D	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
55	Base Oil Tank E	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	0 tpy	0 tpy	0 tpy	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
59	Future Chemical Tank I	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	0 tpy	0 tpy	0 tpy	0 tpy
61	Biocide Tank K	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
62	Future Chemical Tank L	NA	750 bbls	0 tpy	0 tpy	0 tpy	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	0 tpy	0 tpy	0 tpy	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	0 tpy	0 tpy	0 tpy	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	0 tpy	0 tpy	0 tpy	0 tpy
Total Potential Annual Emissions (After Controls/Limitations) - Carbon Dioxide Equivalent							290,130 tpy

Notes:

¹ Global Warming Potentials (Table A-1, 40 CFR 98)

Name	GWP
CO ₂	1
CH ₄	25
N ₂ O	298

Table D-12. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Nitrogen Oxides

Emission Unit				Emission Factor		Expected Actual Annual Emissions (After Controls/Limitations) ¹		Potential Annual Emissions (Before Controls/Limitations) ¹		Potential Annual Emissions (After Controls/Limitations) ¹	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ²		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	Variable	Table E, AQ0923TVP02	8,295 hr/yr	18.3 tpy ³	8,760 hr/yr	23.7 tpy ⁴	8,760 hr/yr	23.7 tpy ⁴
2	Gas Turbine #2	Fuel Gas	8.25 MW	Variable	Table E, AQ0923TVP02	7,517 hr/yr	16.5 tpy ³	8,760 hr/yr	23.7 tpy ⁴	8,760 hr/yr	23.7 tpy ⁴
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	Variable	Table E, AQ0923TVP02	2,208 hr/yr	6.4 tpy ³	8,760 hr/yr	138.0 tpy ^{4,5}	8,160 hr/yr	22.0 tpy ⁴
		Diesel	7.70 MW	31.5 lb/hr	AQ0923TVP02	15 hr/yr	0.2 tpy ³			600 hr/yr	9.5 tpy ⁴
33	Gas Turbine #4	Fuel Gas	8.25 MW	Variable	Table E, AQ0923TVP02	7,949 hr/yr	14.9 tpy ³	8,760 hr/yr	23.7 tpy ⁴	8,760 hr/yr	23.7 tpy ⁴
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	49.59 lb/hr	Table G, AQ0923TVP02	29 hr/yr	0.7 tpy	8,760 hr/yr	217.2 tpy	2,000 hr/yr	49.6 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	0.068 lb/MMBtu	Table G, AQ0923TVP02	31 MMscf/yr	1.2 tpy	365 days/yr	5.0 tpy	365 days/yr	5.0 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	0.068 lb/MMBtu	Table G, AQ0923TVP02			365 days/yr	103.6 tpy	98 MMscf/yr	3.7 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	72 gal/yr	0.00 tpy	8,760 hr/yr	0.9 tpy	8,760 hr/yr	0.9 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	12 gal/yr	0 tpy	8,760 hr/yr	0.9 tpy	8,760 hr/yr	0.9 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	100 lb/MMscf	Table G, AQ0923TVP02	0 hr/yr	0 tpy	8,760 hr/yr	4.1 tpy	8,760 hr/yr	4.1 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	20.6 lb/hr	Table G, AQ0923TVP02	13 hr/yr	0.1 tpy	8,760 hr/yr	90.2 tpy	500 hr/yr	5.1 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	0.14 lb/MMBtu	Table G, AQ0923TVP02	20 hr/yr	0.003 tpy	8,760 hr/yr	1.3 tpy	8,760 hr/yr	1.3 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	0.14 lb/MMBtu	Table G, AQ0923TVP02	20 hr/yr	0.003 tpy	8,760 hr/yr	1.3 tpy	8,760 hr/yr	1.3 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	0.14 lb/MMBtu	Table G, AQ0923TVP02	4,380 hr/yr	0.3 tpy	8,760 hr/yr	0.6 tpy	8,760 hr/yr	0.6 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	0.14 lb/MMBtu	Table G, AQ0923TVP02	4,380 hr/yr	0.3 tpy	8,760 hr/yr	0.6 tpy	8,760 hr/yr	0.6 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	6.71 g/bhp-hr	Table G, AQ0923TVP02	12 hr/yr	0.3 tpy	8,760 hr/yr	217.1 tpy	8,760 hr/yr	217.1 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	42.46 lb/hr	Table G, AQ0923TVP02	10 hr/yr	0.2 tpy	8,760 hr/yr	186.0 tpy	2,000 hr/yr	42.5 tpy
50	Fire Water Pump	Diesel	183 bhp	2.5 g/bhp-hr	Table G, AQ0923TVP02	26 hr/yr	0.01 tpy	8,760 hr/yr	4.4 tpy	100 hr/yr	0.1 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	11,657 gal/yr	0.1 tpy	8,760 hr/yr	2.2 tpy	8,760 hr/yr	2.2 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	21,224 gal/yr	0.2 tpy	8,760 hr/yr	1.6 tpy	8,760 hr/yr	1.6 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	7,760 gal/yr	0.1 tpy	8,760 hr/yr	1.6 tpy	8,760 hr/yr	1.6 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	11,662 gal/yr	0.1 tpy	8,760 hr/yr	0.6 tpy	8,760 hr/yr	0.6 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	14,253 gal/yr	0.1 tpy	8,760 hr/yr	0.6 tpy	8,760 hr/yr	0.6 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	3.45 g/bhp-hr	Table G, AQ0923TVP02	4 hr/yr	0.0 tpy	8,760 hr/yr	14.1 tpy	8,760 hr/yr	14.1 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	3.0 g/hp-hr	Table G, AQ0923TVP02	7 hr/yr	0.01 tpy	8,760 hr/yr	9.3 tpy	8,760 hr/yr	9.3 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	3.0 g/hp-hr	Table G, AQ0923TVP02	13 hr/yr	0.01 tpy	8,760 hr/yr	9.3 tpy	8,760 hr/yr	9.3 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	69,913 gal/yr	0.7 tpy	8,760 hr/yr	3.1 tpy	8,760 hr/yr	3.1 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	69,913 gal/yr	0.7 tpy	8,760 hr/yr	3.1 tpy	8,760 hr/yr	3.1 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	87,652 gal/yr	0.9 tpy	8,760 hr/yr	3.8 tpy	8,760 hr/yr	3.8 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	0 gal/yr	0 tpy	8,760 hr/yr	3.8 tpy	8,760 hr/yr	3.8 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	0 gal/yr	0 tpy	8,760 hr/yr	2.3 tpy	8,760 hr/yr	2.3 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.3 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	78,273 gal/yr	0.8 tpy	8,760 hr/yr	3.0 tpy	8,760 hr/yr	3.0 tpy
99a	Rig Boiler #2	Diesel	3.3 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	82,181 gal/yr	0.8 tpy	8,760 hr/yr	3.0 tpy	8,760 hr/yr	3.0 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	35,116 gal/yr	0.4 tpy	8,760 hr/yr	3.2 tpy	8,760 hr/yr	3.2 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	37,240 gal/yr	0.4 tpy	8,760 hr/yr	4.6 tpy	8,760 hr/yr	4.6 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	0 hr/yr	0 tpy	8,760 hr/yr	5.5 tpy	55 days/yr	0.8 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	20 lb/10 ³ gal	Table G, AQ0923TVP02	0 hr/yr	0 tpy	8,760 hr/yr	8.7 tpy	55 days/yr	1.3 tpy
Insignificant Emission Units											

**Table D-12. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Nitrogen Oxides**

Emission Unit				Emission Factor		Expected Actual Annual Emissions (After Controls/Limitations) ¹		Potential Annual Emissions (Before Controls/Limitations) ¹		Potential Annual Emissions (After Controls/Limitations) ¹	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ²		Operation/ Consumption		Operation/ Consumption	
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Nitrogen Oxides							64.7 tpy		1,125.1 tpy		225 tpy ⁶

Notes:

¹ Conversion parameters, fuel characteristics, and equipment assumptions:

Fuel gas heat content (2023 gas analysis): 1,128 Btu/scf
 Diesel fuel heat content (Arctic Diesel): 120,000 Btu/gal
 Propane fuel heat content: 90,500 Btu/gal
 Efficiency of heaters/boilers: 80%

² Based on actual annual use data from calendar year 2023.

³ Emissions calculated using 60-second averaged load and temperature data and Table E of Appendix A emission factors in AQ0923TVP02.

⁴ Emissions calculated using average emission factors from Table E of Appendix A in AQ0923TVP02 at 100% load, 0 depress F.

⁵ Worst case emissions estimated for fuel gas or diesel use.

⁶ PSD Avoidance emission limit under AQ0923MSS11.

Table D-13. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Carbon Monoxide

Emission Unit				Emission Factor		Expected Actual Annual Emissions (After Controls/Limitations) ¹		Potential Annual Emissions (Before Controls/Limitations) ¹		Potential Annual Emissions (After Controls/Limitations) ¹	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ²		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	Variable	AQ0923TVP02	8,295 hr/yr	7.0 tpy ³	8,760 hr/yr	23.7 tpy ⁴	8,760 hr/yr	23.7 tpy ⁴
2	Gas Turbine #2	Fuel Gas	8.25 MW	Variable	AQ0923TVP02	7,517 hr/yr	7.5 tpy ³	8,760 hr/yr	23.7 tpy ⁴	8,760 hr/yr	23.7 tpy ⁴
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	Variable	AQ0923TVP02	2,208 hr/yr	6.8 tpy ³	8,760 hr/yr	43.8 tpy ^{4,5}	8,160 hr/yr	22.0 tpy ⁴
		Diesel	7.70 MW	10 lb/hr	AQ0923TVP02	15 hr/yr	0.1 tpy ³			600 hr/yr	3.0 tpy ⁴
33	Gas Turbine #4	Fuel Gas	8.25 MW	Variable	AQ0923TVP02	7,949 hr/yr	4.2 tpy ³	8,760 hr/yr	23.7 tpy ⁴	8,760 hr/yr	23.7 tpy ⁴
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	6.46 lb/hr	Table G, AQ0923TVP02	29 hr/yr	0.09 tpy	8,760 hr/yr	28.3 tpy	2,000 hr/yr	6.5 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	0.31 lb/MMBtu	Table G, AQ0923TVP02	31 MMscf/yr	5.5 tpy	365 days/yr	23.0 tpy	365 days/yr	23.0 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	0.31 lb/MMBtu	Table G, AQ0923TVP02			365 days/yr	472.2 tpy	98 MMscf/yr	17.0 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	72 gal/yr	0.000 tpy	8,760 hr/yr	0.2 tpy	8,760 hr/yr	0.2 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	12 gal/yr	0 tpy	8,760 hr/yr	0.2 tpy	8,760 hr/yr	0.2 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	84 lb/MMscf	Table G, AQ0923TVP02	0 hr/yr	0 tpy	8,760 hr/yr	3.4 tpy	8,760 hr/yr	3.4 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	2.0 lb/hr	Table G, AQ0923TVP02	13 hr/yr	0.01 tpy	8,760 hr/yr	8.8 tpy	500 hr/yr	0.5 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	0.0829 lb/MMBtu	Table G, AQ0923TVP02	20 hr/yr	0.0016 tpy	8,760 hr/yr	0.73 tpy	8,760 hr/yr	0.73 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	0.0829 lb/MMBtu	Table G, AQ0923TVP02	20 hr/yr	0.0016 tpy	8,760 hr/yr	0.73 tpy	8,760 hr/yr	0.73 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	0.0829 lb/MMBtu	Table G, AQ0923TVP02	4,380 hr/yr	0.17 tpy	8,760 hr/yr	0.34 tpy	8,760 hr/yr	0.34 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	0.0829 lb/MMBtu	Table G, AQ0923TVP02	4,380 hr/yr	0.17 tpy	8,760 hr/yr	0.34 tpy	8,760 hr/yr	0.34 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	0.88 g/bhp-hr	Table G, AQ0923TVP02	12 hr/yr	0.0 tpy	8,760 hr/yr	28.5 tpy	8,760 hr/yr	28.5 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	3.92 lb/hr	Table G, AQ0923TVP02	10 hr/yr	0.02 tpy	8,760 hr/yr	17.2 tpy	2,000 hr/yr	3.9 tpy
50	Fire Water Pump	Diesel	183 bhp	1.1 g/bhp-hr	Table G, AQ0923TVP02	26 hr/yr	0.006 tpy	8,760 hr/yr	1.9 tpy	100 hr/yr	0.02 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	11,657 gal/yr	0.03 tpy	8,760 hr/yr	0.6 tpy	8,760 hr/yr	0.6 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	21,224 gal/yr	0.05 tpy	8,760 hr/yr	0.4 tpy	8,760 hr/yr	0.4 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	7,760 gal/yr	0.02 tpy	8,760 hr/yr	0.4 tpy	8,760 hr/yr	0.4 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	11,662 gal/yr	0.0 tpy	8,760 hr/yr	0.1 tpy	8,760 hr/yr	0.1 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	14,253 gal/yr	0.0 tpy	8,760 hr/yr	0.1 tpy	8,760 hr/yr	0.1 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	0.54 g/bhp-hr	Table G, AQ0923TVP02	4 hr/yr	0.00 tpy	8,760 hr/yr	2.2 tpy	8,760 hr/yr	2.2 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	2.6 g/bhp-hr	Table G, AQ0923TVP02	7 hr/yr	0.01 tpy	8,760 hr/yr	8.0 tpy	8,760 hr/yr	8.0 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	2.6 g/bhp-hr	Table G, AQ0923TVP02	13 hr/yr	0.01 tpy	8,760 hr/yr	8.0 tpy	8,760 hr/yr	8.0 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	69,913 gal/yr	0.17 tpy	8,760 hr/yr	0.8 tpy	8,760 hr/yr	0.8 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	69,913 gal/yr	0.17 tpy	8,760 hr/yr	0.8 tpy	8,760 hr/yr	0.8 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	87,652 gal/yr	0.22 tpy	8,760 hr/yr	1.0 tpy	8,760 hr/yr	1.0 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	0 gal/yr	0 tpy	8,760 hr/yr	1.0 tpy	8,760 hr/yr	1.0 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	0 gal/yr	0 tpy	8,760 hr/yr	0.6 tpy	8,760 hr/yr	0.6 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	78,273 gal/yr	0.2 tpy	8,760 hr/yr	0.8 tpy	8,760 hr/yr	0.8 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	82,181 gal/yr	0.2 tpy	8,760 hr/yr	0.8 tpy	8,760 hr/yr	0.8 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	35,116 gal/yr	0.1 tpy	8,760 hr/yr	0.8 tpy	8,760 hr/yr	0.8 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	37,240 gal/yr	0.1 tpy	8,760 hr/yr	1.1 tpy	8,760 hr/yr	1.1 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	0 hr/yr	0 tpy	8,760 hr/yr	1.4 tpy	55 days/yr	0.2 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	5 lb/10 ³ gal	Table G, AQ0923TVP02	0 hr/yr	0 tpy	8,760 hr/yr	2.2 tpy	55 days/yr	0.3 tpy
Insignificant Emission Units											

**Table D-13. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Carbon Monoxide**

Emission Unit				Emission Factor		Expected Actual Annual Emissions (After Controls/Limitations) ¹		Potential Annual Emissions (Before Controls/Limitations) ¹		Potential Annual Emissions (After Controls/Limitations) ¹	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ²		Operation/ Consumption		Operation/ Consumption	
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Carbon Monoxide							32.9 tpy		731.5 tpy		225 tpy ⁶

Notes:

¹ Conversion parameters, fuel characteristics, and equipment assumptions:

Fuel gas heat content (2023 gas analysis): 1,128 Btu/scf
 Diesel fuel heat content (Arctic Diesel): 120,000 Btu/gal
 Propane fuel heat content: 90,500 Btu/gal
 Efficiency of heaters: 80%

² Based on actual annual use data from calendar year 2023.

³ Emissions calculated using 60-second averaged load and temperature data and Table F of Appendix A emission factors in AQ0923TVP02.

⁴ Emissions calculated using average emission factors from Table F of Appendix A in AQ0923TVP02 at 100% load, 0 degrees F.

⁵ Worst case emissions estimated for fuel gas or diesel use.

⁶ PSD Avoidance emission limit under AQ0923MSS11.

Table D-14. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Particulate Matter Less than 10 Microns

Emission Unit				Emission Factor		Expected Actual Annual Emissions (After Controls/Limitations) ¹		Potential Annual Emissions (Before Controls/Limitations) ¹		Potential Annual Emissions (After Controls/Limitations) ¹	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ²		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	6.60E-03 lb/MMBtu	AP-42, Table 3.1-2a	8,295 hr/yr	2.3 tpy	8,760 hr/yr	2.4 tpy	8,760 hr/yr	2.4 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	6.60E-03 lb/MMBtu	AP-42, Table 3.1-2a	7,517 hr/yr	2.1 tpy	8,760 hr/yr	2.4 tpy	8,760 hr/yr	2.4 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	6.60E-03 lb/MMBtu	AP-42, Table 3.1-2a	2,208 hr/yr	0.6 tpy	8,760 hr/yr	4.1 tpy ³	8,160 hr/yr	2.2 tpy
		Diesel	7.70 MW	1.20E-02 lb/MMBtu	AP-42, Table 3.1-2a	15 hr/yr	0.007 tpy			600 hr/yr	0.3 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	6.60E-03 lb/MMBtu	AP-42, Table 3.1-2a	7,949 hr/yr	2.2 tpy	8,760 hr/yr	2.4 tpy	8,760 hr/yr	2.4 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	0.76 lb/hr	Vendor Data ⁴	29 hr/yr	0.011 tpy	8,760 hr/yr	3.3 tpy	2,000 hr/yr	0.8 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	40 µg/liter	AP-42, Table 13.5-1	31 MMscf/yr	0.4 tpy	365 days/yr	1.6 tpy	365 days/yr	1.6 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	40 µg/liter	AP-42, Table 13.5-1			365 days/yr	33.1 tpy	98 MMscf/yr	8.9 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	72 gal/yr	0.00 tpy	8,760 hr/yr	0.1 tpy	8,760 hr/yr	0.1 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	12 gal/yr	0.00 tpy	8,760 hr/yr	0.1 tpy	8,760 hr/yr	0.1 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	7.6 lb/MMScf	AP-42, Table 1.4-2	0 hr/yr	0 tpy	8,760 hr/yr	0.3 tpy	8,760 hr/yr	0.3 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	0.38 lb/hr	Vendor Data	13 hr/yr	0.002 tpy	8,760 hr/yr	1.6 tpy	500 hr/yr	0.09 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	0.7 lb/10 ³ gal	AP-42, Table 1.5-1	20 hr/yr	0.0002 tpy	8,760 hr/yr	0.08 tpy	8,760 hr/yr	0.08 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	0.7 lb/10 ³ gal	AP-42, Table 1.5-1	20 hr/yr	0.0002 tpy	8,760 hr/yr	0.08 tpy	8,760 hr/yr	0.08 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	0.7 lb/10 ³ gal	AP-42, Table 1.5-1	4,380 hr/yr	0.02 tpy	8,760 hr/yr	0.04 tpy	8,760 hr/yr	0.04 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	0.7 lb/10 ³ gal	AP-42, Table 1.5-1	4,380 hr/yr	0.02 tpy	8,760 hr/yr	0.04 tpy	8,760 hr/yr	0.04 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	0.05 g/bhp-hr	Vendor Data	12 hr/yr	0.002 tpy	8,760 hr/yr	1.6 tpy	8,760 hr/yr	1.6 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	0.04 g/bhp-hr	Vendor Data	10 hr/yr	0.002 tpy	8,760 hr/yr	1.4 tpy	2,000 hr/yr	0.3 tpy
50	Fire Water Pump	Diesel	183 bhp	0.09 g/bhp-hr	Vendor Data	26 hr/yr	0.0005 tpy	8,760 hr/yr	0.2 tpy	100 hr/yr	0.002 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	11,657 gal/yr	0.02 tpy	8,760 hr/yr	0.4 tpy	8,760 hr/yr	0.4 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	21,224 gal/yr	0.04 tpy	8,760 hr/yr	0.3 tpy	8,760 hr/yr	0.3 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	7,760 gal/yr	0.01 tpy	8,760 hr/yr	0.3 tpy	8,760 hr/yr	0.3 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	11,662 gal/yr	0.0 tpy	8,760 hr/yr	0.1 tpy	8,760 hr/yr	0.1 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	14,253 gal/yr	0.0 tpy	8,760 hr/yr	0.1 tpy	8,760 hr/yr	0.1 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	0.08 g/bhp-hr	Vendor Data	4 hr/yr	0.000 tpy	8,760 hr/yr	0.3 tpy	8,760 hr/yr	0.3 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	2.20E-03 lb/bhp-hr	AP-42, Table 3.3-1	7 hr/yr	0.002 tpy	8,760 hr/yr	3.1 tpy	8,760 hr/yr	3.1 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	2.20E-03 lb/bhp-hr	AP-42, Table 3.3-1	13 hr/yr	0.005 tpy	8,760 hr/yr	3.1 tpy	8,760 hr/yr	3.1 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	69,913 gal/yr	0.12 tpy	8,760 hr/yr	0.5 tpy	8,760 hr/yr	0.5 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	69,913 gal/yr	0.12 tpy	8,760 hr/yr	0.5 tpy	8,760 hr/yr	0.5 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	87,652 gal/yr	0.14 tpy	8,760 hr/yr	0.6 tpy	8,760 hr/yr	0.6 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	0 gal/yr	0 tpy	8,760 hr/yr	0.6 tpy	8,760 hr/yr	0.6 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	0 gal/yr	0 tpy	8,760 hr/yr	0.4 tpy	8,760 hr/yr	0.4 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	78,273 gal/yr	0.1 tpy	8,760 hr/yr	0.5 tpy	8,760 hr/yr	0.5 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	82,181 gal/yr	0.1 tpy	8,760 hr/yr	0.5 tpy	8,760 hr/yr	0.5 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	35,116 gal/yr	0.1 tpy	8,760 hr/yr	0.5 tpy	8,760 hr/yr	0.5 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	37,240 gal/yr	0.1 tpy	8,760 hr/yr	0.8 tpy	8,760 hr/yr	0.8 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	0 hr/yr	0 tpy	8,760 hr/yr	0.9 tpy	55 days/yr	0.1 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	3.3 lb/10 ³ gal	AP-42, Table 1.3-1	0 hr/yr	0 tpy	8,760 hr/yr	1.4 tpy	55 days/yr	0.2 tpy
Insignificant Emission Units											

Table D-14. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Particulate Matter Less than 10 Microns

Emission Unit				Emission Factor		Expected Actual Annual Emissions (After Controls/Limitations) ¹		Potential Annual Emissions (Before Controls/Limitations) ¹		Potential Annual Emissions (After Controls/Limitations) ¹	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ²		Operation/ Consumption		Operation/ Consumption	
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Stop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Stop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Stop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Stop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Stop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Stop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Stop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Stop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Stop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Stop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Particulate Matter Less than 10 Microns							8.5 tpy		69.9 tpy		36.7 tpy

Notes:

¹ Conversion parameters, fuel characteristics, and equipment assumptions:

Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Propane fuel heat content:	90,500 Btu/gal
Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
F Factor HHV, EPA Method 19 (Natural Gas)	8,710 dcf/MMBtu

² Based on actual annual use data from calendar year 2023.

³ Worst case emissions estimated for fuel gas or diesel use.

**Table D-15. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Volatile Organic Compounds**

Emission Unit				Emission Factor		Expected Actual Annual Emissions (After Controls/Limitations) ¹		Potential Annual Emissions (Before Controls/Limitations) ¹		Potential Annual Emissions (After Controls/Limitations) ¹	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ²		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	3.0 lb/hr	Vendor Data	8,295 hr/yr	12.4 tpy	8,760 hr/yr	13.1 tpy	8,760 hr/yr	13.1 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	3.0 lb/hr	Vendor Data	7,517 hr/yr	11.3 tpy	8,760 hr/yr	13.1 tpy	8,760 hr/yr	13.1 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	3.0 lb/hr	Vendor Data	2,208 hr/yr	3.3 tpy	8,760 hr/yr	13.1 tpy ³	8,160 hr/yr	12.2 tpy
		Diesel	7.70 MW	2.9 lb/hr	Vendor Data	15 hr/yr	0.02 tpy			600 hr/yr	0.9 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	3.0 lb/hr	Vendor Data	7,949 hr/yr	11.9 tpy	8,760 hr/yr	13.1 tpy	8,760 hr/yr	13.1 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	0.7 lb/hr	Vendor Data	29 hr/yr	0.010 tpy	8,760 hr/yr	3.08 tpy	2,000 hr/yr	0.7 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	0.14 lb/MMBtu	AP-42, Table 13.5-1			365 days/yr	10.4 tpy	365 days/yr	10.4 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	0.14 lb/MMBtu	AP-42, Table 13.5-1	31 MMscf/yr	2.5 tpy	365 days/yr	213.3 tpy	98 MMscf/yr	7.7 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	72 gal/yr	1.22E-05 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	12 gal/yr	2.04E-06 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	5.5 lb/MMscf	AP-42, Table 1.4-2	0 hr/yr	0 tpy	8,760 hr/yr	0.2 tpy	8,760 hr/yr	0.2 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	0.25 lb/hr	Vendor Data ⁴	13 hr/yr	0.002 tpy	8,760 hr/yr	1.1 tpy	500 hr/yr	0.06 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	1.0 lb/10 ³ gal	AP-42, Table 1.5-1	20 hr/yr	0.0003 tpy	8,760 hr/yr	0.1 tpy	8,760 hr/yr	0.1 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	1.0 lb/10 ³ gal	AP-42, Table 1.5-1	20 hr/yr	0.0003 tpy	8,760 hr/yr	0.1 tpy	8,760 hr/yr	0.1 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	1.0 lb/10 ³ gal	AP-42, Table 1.5-1	4,380 hr/yr	0.03 tpy	8,760 hr/yr	0.06 tpy	8,760 hr/yr	0.06 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	1.0 lb/10 ³ gal	AP-42, Table 1.5-1	4,380 hr/yr	0.03 tpy	8,760 hr/yr	0.06 tpy	8,760 hr/yr	0.06 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	lb/Mgal 20 annual throughput	AP-42, Table 5.2-7	8,760 hr/yr	tpy	8,760 hr/yr	tpy	8,760 hr/yr	tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	6.42E-04 lb/bhp-hr	AP-42, Table 3.4-1	12 hr/yr	0.01 tpy	8,760 hr/yr	9.4 tpy	8,760 hr/yr	9.4 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	0.15 g/bhp-hr	Vendor Data	10 hr/yr	0.006 tpy	8,760 hr/yr	5.3 tpy	2,000 hr/yr	1.2 tpy
50	Fire Water Pump	Diesel	183 bhp	0.20 g/bhp-hr	Vendor Data	26 hr/yr	0.001 tpy	8,760 hr/yr	0.4 tpy	100 hr/yr	0.004 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	11,657 gal/yr	0.002 tpy	8,760 hr/yr	0.04 tpy	8,760 hr/yr	0.04 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	21,224 gal/yr	0.004 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	7,760 gal/yr	0.001 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	11,662 gal/yr	0.002 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	14,253 gal/yr	0.002 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	2.47E-03 lb/bhp-hr	AP-42, Table 3.3-1	4 hr/yr	4.60E-06 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	2.47E-03 lb/bhp-hr	AP-42, Table 3.3-1	7 hr/yr	0.003 tpy	8,760 hr/yr	3.5 tpy	8,760 hr/yr	3.5 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	2.47E-03 lb/bhp-hr	AP-42, Table 3.3-1	13 hr/yr	0.005 tpy	8,760 hr/yr	3.5 tpy	8,760 hr/yr	3.5 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	69,913 gal/yr	0.01 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	69,913 gal/yr	0.01 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	87,652 gal/yr	0.01 tpy	8,760 hr/yr	0.07 tpy	8,760 hr/yr	0.07 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	0 gal/yr	0 tpy	8,760 hr/yr	0.07 tpy	8,760 hr/yr	0.07 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	0 gal/yr	0 tpy	8,760 hr/yr	0.04 tpy	8,760 hr/yr	0.04 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	78,273 gal/yr	0.01 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	82,181 gal/yr	0.01 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	35,116 gal/yr	0.01 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	37,240 gal/yr	0.01 tpy	8,760 hr/yr	0.08 tpy	8,760 hr/yr	0.08 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	0 hr/yr	0 tpy	8,760 hr/yr	0.09 tpy	55 days/yr	0.01 tpy

Table D-15. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Volatile Organic Compounds

Emission Unit				Emission Factor		Expected Actual Annual Emissions (After Controls/Limitations) ¹		Potential Annual Emissions (Before Controls/Limitations) ¹		Potential Annual Emissions (After Controls/Limitations) ¹	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ²		Operation/ Consumption		Operation/ Consumption	
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	0.34 lb/10 ³ gal	AP-42, Table 1.3-3	0 hr/yr	0 tpy	8,760 hr/yr	0.1 tpy	55 days/yr	0.02 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Volatile Organic Compounds							41.6 tpy		303.8 tpy		90.2 tpy

Notes:

¹ Conversion parameters, fuel characteristics, and equipment assumptions:

Fuel gas heat content (2023 gas analysis): 1,128 Btu/scf
Diesel fuel heat content (Arctic Diesel): 120,000 Btu/gal
Propane fuel heat content: 90,500 Btu/gal
Efficiency of heaters: 80%

² Based on actual annual use data from calendar year 2023.

³ Worst case emissions estimated for fuel gas or diesel use.

⁴ Emissions calculated based on 100% load.

Table D-16. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Sulfur Dioxide

Emission Unit					Emission Factor ¹			Expected Actual Annual Emissions (After Controls/Limitations) ¹		Potential Annual Emissions (Before Controls/Limitations) ¹		Potential Annual Emissions (After Controls/Limitations) ¹	
ID	Description	Fuel	Rating/Size	Fuel Consumption Rate	Actual Rate	Potential Rate	Reference	Operation/ Consumption ²		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units													
1	Gas Turbine #1	Fuel Gas	8.25 MW	73.9 Mscf/hr	13.6 lb/MMscf	42.1 lb/MMscf	Mass Balance	525 MMscf/yr	0.26 tpy	8,760 hr/yr	13.6 tpy	8,760 hr/yr	13.6 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	73.9 Mscf/hr	13.6 lb/MMscf	42.1 lb/MMscf	Mass Balance	509 MMscf/yr	0.26 tpy	8,760 hr/yr	13.6 tpy	8,760 hr/yr	13.6 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	73.9 Mscf/hr	13.6 lb/MMscf	42.1 lb/MMscf	Mass Balance	194 MMscf/yr	0.10 tpy	8,760 hr/yr	13.6 tpy ⁴	8,160 hr/yr	12.7 tpy
33	Dual Fuel Turbine #3	Diesel	7.70 MW	868.4 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	10,192 gal/yr	0.91 tpy	8,760 hr/yr	13.6 tpy	600 hr/yr	0.05 tpy
32	Gas Turbine #4	Fuel Gas	8.25 MW	73.9 Mscf/hr	13.6 lb/MMscf	42.1 lb/MMscf	Mass Balance	341 MMscf/yr	0.17 tpy	8,760 hr/yr	13.6 tpy	8,760 hr/yr	13.6 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	105 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	1,997 gal/yr	2.04E-04 tpy	8,760 hr/yr	0.09 tpy	2,000 hr/yr	0.02 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	15 Mscf/hr	13.6 lb/MMscf	42.1 lb/MMscf	Mass Balance	31 MMscf/yr	0.21 tpy	365 days/yr	0.1 tpy	365 days/yr	0.1 tpy
4	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	308 Mscf/hr	13.6 lb/MMscf	42.1 lb/MMscf	Mass Balance	31 MMscf/yr	0.21 tpy	365 days/yr	2.4 tpy	98 MMscf/yr	2.1 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	10 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	72 gal/yr	7.17E-05 tpy	8,760 hr/yr	8.73E-03 tpy	8,760 hr/yr	8.73E-03 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	10 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	12 gal/yr	0 tpy	8,760 hr/yr	8.73E-03 tpy	8,760 hr/yr	8.73E-03 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	12 Mscf/hr	13.6 lb/MMscf	42.1 lb/MMscf	Mass Balance	0 hr/yr	0 tpy	8,760 hr/yr	2.1 tpy	8,760 hr/yr	2.1 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	87 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	13 hr/yr	1.16E-04 tpy	8,760 hr/yr	0.08 tpy	500 hr/yr	0.004 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	22 gal/hr	1.6 lb/10 ³ gal	1.6 lb/10 ³ gal	Mass Balance	20 hr/yr	4.25E-04 tpy	8,760 hr/yr	0.2 tpy	8,760 hr/yr	0.2 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	22 gal/hr	1.6 lb/10 ³ gal	1.6 lb/10 ³ gal	Mass Balance	20 hr/yr	4.25E-04 tpy	8,760 hr/yr	0.2 tpy	8,760 hr/yr	0.2 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	10 gal/hr	1.6 lb/10 ³ gal	1.6 lb/10 ³ gal	Mass Balance	4,380 hr/yr	0.04 tpy	8,760 hr/yr	0.09 tpy	8,760 hr/yr	0.09 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	10 gal/hr	1.6 lb/10 ³ gal	1.6 lb/10 ³ gal	Mass Balance	4,380 hr/yr	0.04 tpy	8,760 hr/yr	0.09 tpy	8,760 hr/yr	0.09 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	195 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	12 hr/yr	2.40E-04 tpy	8,760 hr/yr	0.2 tpy	8,760 hr/yr	0.2 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	212 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	10 hr/yr	2.17E-04 tpy	8,760 hr/yr	0.2 tpy	2,000 hr/yr	0.04 tpy
50	Fire Water Pump	Diesel	183 bhp	11 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	26 hr/yr	2.84E-05 tpy	8,760 hr/yr	0.01 tpy	100 hr/yr	1.09E-04 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	25 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	11,657 gal/yr	0.03 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	18 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	21,224 gal/yr	3.91E-02 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	18 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	7,760 gal/yr	1.43E-02 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	7 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	11,662 gal/yr	8.07E-03 tpy	8,760 hr/yr	6.06E-03 tpy	8,760 hr/yr	6.06E-03 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	7 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	14,253 gal/yr	9.86E-03 tpy	8,760 hr/yr	6.06E-03 tpy	8,760 hr/yr	6.06E-03 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	25 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	4 hr/yr	1.01E-05 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	19 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	7 hr/yr	1.34E-05 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	19 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	13 hr/yr	4.26E-04 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	35 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	69,913 gal/yr	2.40E-02 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	35 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	69,913 gal/yr	2.40E-02 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	44 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	87,652 gal/yr	3.77E-02 tpy	8,760 hr/yr	0.04 tpy	8,760 hr/yr	0.04 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	44 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	0 gal/yr	0 tpy	8,760 hr/yr	0.04 tpy	8,760 hr/yr	0.04 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	26 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	0 gal/yr	0 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3,300 MMBtu/hr	34 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	78,273 gal/yr	2.64E-02 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
99a	Rig Boiler #2	Diesel	3,300 MMBtu/hr	34 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	82,181 gal/yr	2.77E-02 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	36 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	35,116 gal/yr	1.26E-02 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	52 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	37,240 gal/yr	1.90E-02 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	63 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	0 hr/yr	0 tpy	8,760 hr/yr	0.06 tpy	55 days/yr	0.008 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	99 gal/hr	2.05E-04 lb/gal	2.05E-04 lb/gal	Mass Balance	0 hr/yr	0 tpy	8,760 hr/yr	0.09 tpy	55 days/yr	0.01 tpy

Table D-16. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Sulfur Dioxide

Emission Unit					Emission Factor ¹			Expected Actual Annual Emissions (After Controls/Limitations) ¹		Potential Annual Emissions (Before Controls/Limitations) ¹		Potential Annual Emissions (After Controls/Limitations) ¹	
ID	Description	Fuel	Rating/Size	Fuel Consumption Rate	Actual Rate	Potential Rate	Reference	Operation/ Consumption ²		Operation/ Consumption		Operation/ Consumption	
Insignificant Emission Units													
NA	Condensate Tank S	Condensate	1,176 gallons	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room Diesel Day Tank	Diesel	3,245 gallons	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Stop Oil Tank A	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Stop Oil Tank B	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Stop Oil Tank C	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Stop Oil Tank D	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Stop Oil Tank E	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Stop Oil Tank F	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Stop Oil Tank G	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Stop Oil Tank H	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Stop Oil Tank I	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Stop Oil Tank J	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	N A	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Sulfur Dioxide									2.3 tpy		60.8 tpy		59.2 tpy

Notes:

¹ Conversion parameters, fuel characteristics, and equipment assumptions:

Fuel gas sulfur content (2023 Average): 81 ppmv
Fuel gas sulfur content (permit limit): 250 ppmv
Diesel Sulfur content (ULSD): 0.0015 wt pct. S
Propane sulfur content (permit limit): 185 ppmw
Fuel gas heat content (2022 gas analysis): 1,128 Btu/scf
Diesel fuel heat content (Arctic Diesel): 120,000 Btu/gal
Propane fuel heat content: 90,500 Btu/gal
Solar turbine heat rate: 10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5: 7,000 Btu/hp-hr
Efficiency of heaters: 80%
Density of Arctic Diesel: 6.82 lb/gal

² Based on actual annual use data from calendar year 2023.

³ Worst case emissions estimated for fuel gas or diesel use.

Table D-17. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: 1,3 Butadiene ¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	4.30E-07 lb/MMBtu	AP-42, Table 3.1-3	8,295 hr/yr	1.5E-04 tpy	8,760 hr/yr	1.6E-04 tpy	8,760 hr/yr	1.6E-04 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	4.30E-07 lb/MMBtu	AP-42, Table 3.1-3	7,517 hr/yr	1.3E-04 tpy	8,760 hr/yr	1.6E-04 tpy	8,760 hr/yr	1.6E-04 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	4.30E-07 lb/MMBtu	AP-42, Table 3.1-3	2,208 hr/yr	3.96E-05 tpy	8,760 hr/yr	0.005 tpy ⁵	8,160 hr/yr	1.5E-04 tpy
		Diesel	7.70 MW	1.60E-05 lb/MMBtu	AP-42, Table 3.1-4	15 hr/yr	9.02E-06 tpy	8,760 hr/yr	0.005 tpy ⁵	600 hr/yr	3.7E-04 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	4.30E-07 lb/MMBtu	AP-42, Table 3.1-3	7,949 hr/yr	1.4E-04 tpy	8,760 hr/yr	1.6E-04 tpy	8,760 hr/yr	1.6E-04 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	N A	NA	29 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	N A	NA	31 MMscf/yr	0 tpy	365 days/yr	0 tpy	365 days/yr	0 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	N A	NA			365 days/yr	0 tpy	98 MMscf/yr	0 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	72 gal/yr	5.33E-07 tpy	8,760 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	12 gal/yr	8.88E-08 tpy	8,760 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	N A	NA	13 hr/yr	0 tpy	8,760 hr/yr	0 tpy	500 hr/yr	0 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	20 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	20 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	N A	NA	12 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	N A	NA	10 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
50	Fire Water Pump	Diesel	183 bhp	3.91E-05 lb/MMBtu	AP-42, Table 3.3-2	26 hr/yr	6.51E-07 tpy	8,760 hr/yr	2.2E-04 tpy	100 hr/yr	2.5E-06 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	11,657 gal/yr	8.6E-05 tpy	8,760 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	21,224 gal/yr	1.6E-04 tpy	8,760 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	7,760 gal/yr	5.7E-05 tpy	8,760 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	11,662 gal/yr	8.6E-05 tpy	8,760 hr/yr	4.4E-04 tpy	8,760 hr/yr	4.4E-04 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	14,253 gal/yr	1.1E-04 tpy	8,760 hr/yr	4.4E-04 tpy	8,760 hr/yr	4.4E-04 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	3.91E-05 lb/MMBtu	AP-42, Table 3.3-2	4 hr/yr	2.31E-07 tpy	8,760 hr/yr	5.1E-04 tpy	8,760 hr/yr	5.1E-04 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	3.91E-05 lb/MMBtu	AP-42, Table 3.3-2	7 hr/yr	3.07E-07 tpy	8,760 hr/yr	3.8E-04 tpy	8,760 hr/yr	3.8E-04 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	3.91E-05 lb/MMBtu	AP-42, Table 3.3-2	13 hr/yr	5.69E-07 tpy	8,760 hr/yr	3.8E-04 tpy	8,760 hr/yr	3.8E-04 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	69,913 gal/yr	0.001 tpy	8,760 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	69,913 gal/yr	0.001 tpy	8,760 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	87,652 gal/yr	0.001 tpy	8,760 hr/yr	0.003 tpy	8,760 hr/yr	0.003 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	0 gal/yr	0 tpy	8,760 hr/yr	0.003 tpy	8,760 hr/yr	0.003 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	0 gal/yr	0 tpy	8,760 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	78,273 gal/yr	0.001 tpy	8,760 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	82,181 gal/yr	0.001 tpy	8,760 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	35,116 gal/yr	0.0003 tpy	8,760 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	37,240 gal/yr	0.0003 tpy	8,760 hr/yr	0.003 tpy	8,760 hr/yr	0.003 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oil Boiler / Heater #1	Diesel	6 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	55 days/yr	0.001 tpy
24	Hot Oil Boiler / Heater #2	Diesel	9.5 MMBtu/hr	0.0148 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	55 days/yr	0.001 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,178 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-17. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: 1,3 Butadiene ¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - 1,3 Butadiene							0.0044 tpy		0.046 tpy		0.032 tpy

Notes:

¹ Not excluded from the definition of volatile organic compounds under 40 CFR 50.100(s).

² Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	AP-42, Table 3.1-3	4.3E-07 lb/MMBtu
Diesel-Fired Turbines	AP-42, Table 3.1-4	1.6E-05 lb/MMBtu
Flares	NA	N A
Diesel-Fired Engines, <600 hp	AP-42, Table 3.3-2	3.9E-05 lb/MMBtu
Diesel-Fired Engines, >600 hp	NA	N A
Diesel-Fired Heaters	VCAPCD	0.0148 lb/10 ³ gal
Gas-Fired Heaters	NA	N A
Incinerators	NA	N A

VCAPCD: Ventura County Air Pollution Control District, AB 2588

³ Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal

⁴ Based on actual annual use data from calendar year 2023.

Table D-18. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Acetaldehyde ¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	4.00E-05 lb/MMBtu	AP-42, Table 3.1-3	8,526 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	4.00E-05 lb/MMBtu	AP-42, Table 3.1-3	8,175 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	4.00E-05 lb/MMBtu	AP-42, Table 3.1-3	2,373 hr/yr	0.004 tpy	8,760 hr/yr	0.01 tpy ⁵	8,160 hr/yr	0.01 tpy
		Diesel	7.70 MW	N A	NA	19 hr/yr	0 tpy			600 hr/yr	0 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	4.00E-05 lb/MMBtu	AP-42, Table 3.1-3	6,864 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	2.52E-05 lb/MMBtu	AP-42, Table 3.4-3	41 hr/yr	1.21E-05 tpy	8,760 hr/yr	0.003 tpy	2,000 hr/yr	5.9E-04 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	4.30E-02 lb/MMscf	VCAPCD	27 MMscf/yr	0.0006 tpy	365 days/yr	0.003 tpy	365 days/yr	0.003 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	4.30E-02 lb/MMscf	VCAPCD			365 days/yr	0.06 tpy	98 MMscf/yr	0.002 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	2,318 hr/yr	4.06E-04 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	2,292 hr/yr	4.02E-04 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	2.52E-05 lb/MMBtu	AP-42, Table 3.4-3	46 hr/yr	6.07E-06 tpy	8,760 hr/yr	0.001 tpy	500 hr/yr	6.59E-05 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	2.52E-05 lb/MMBtu	AP-42, Table 3.4-3	49 hr/yr	1.45E-05 tpy	8,760 hr/yr	0.003 tpy	8,760 hr/yr	0.003 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	2.52E-05 lb/MMBtu	AP-42, Table 3.4-3	29 hr/yr	9.30E-06 tpy	8,760 hr/yr	0.003 tpy	2,000 hr/yr	0.0006 tpy
50	Fire Water Pump	Diesel	183 bhp	7.67E-04 lb/MMBtu	AP-42, Table 3.3-2	30 hr/yr	1.47E-05 tpy	8,760 hr/yr	0.004 tpy	100 hr/yr	4.91E-05 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	4,091 hr/yr	7.2E-04 tpy	8,760 hr/yr	0.04 tpy	8,760 hr/yr	0.04 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	1,199 hr/yr	2.1E-04 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	1,199 hr/yr	2.1E-04 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	267 hr/yr	4.7E-05 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	892 hr/yr	1.6E-04 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	7.67E-04 lb/MMBtu	AP-42, Table 3.3-2	137 hr/yr	1.6E-04 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	7.67E-04 lb/MMBtu	AP-42, Table 3.3-2	11 hr/yr	9.45E-06 tpy	8,760 hr/yr	0.008 tpy	8,760 hr/yr	0.008 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	7.67E-04 lb/MMBtu	AP-42, Table 3.3-2	11 hr/yr	9.45E-06 tpy	8,760 hr/yr	0.008 tpy	8,760 hr/yr	0.008 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	704 hr/yr	0.0001 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	2,028 hr/yr	0.0004 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	1,408 hr/yr	0.0002 tpy	8,760 hr/yr	0.07 tpy	8,760 hr/yr	0.07 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	0.07 tpy	8,760 hr/yr	0.07 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	0.04 tpy	8,760 hr/yr	0.04 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3,300 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	3,105 hr/yr	0.001 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
99a	Rig Boiler #2	Diesel	3,300 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	2,261 hr/yr	4.0E-04 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	4,908 hr/yr	0.001 tpy	8,760 hr/yr	0.06 tpy	8,760 hr/yr	0.06 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	4,244 hr/yr	0.001 tpy	8,760 hr/yr	0.08 tpy	8,760 hr/yr	0.08 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oiler Boiler / Heater #1	Diesel	6 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	0.10 tpy	55 days/yr	0.01 tpy
24	Hot Oiler Boiler / Heater #2	Diesel	9.5 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	0.15 tpy	55 days/yr	0.02 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-18. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Acetaldehyde ¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Acetaldehyde							0.05 tpy		1.1 tpy		0.80 tpy

Notes:

¹ Not excluded from the definition of volatile organic compounds under 40 CFR 50.100(s).

² Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	AP-42, Table 3.1-3	4.00E-05 lb/MMBtu
Diesel-Fired Turbines	NA	N A
Flares	VCAPCD	4.30E-02 lb/MMscf
Diesel-Fired Engines, <600 hp	AP-42, Table 3.3-2	7.67E-04 lb/MMBtu
Diesel-Fired Engines, >600 hp	AP-42, Table 3.4-3	2.52E-05 lb/MMBtu
Diesel-Fired Heaters	VCAPCD	0.3506 lb/10 ³ gal
Gas-Fired Heaters	NA	N A
Incinerators	NA	N A

VCAPCD: Ventura County Air Pollution Control District, AB 2588

³ Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-19. Eni US Operating Co. Inc. - Nikaitchuk Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Acrolein ¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	6.40E-06 lb/MMBtu	AP-42, Table 3.1-3	8,526 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	6.40E-06 lb/MMBtu	AP-42, Table 3.1-3	8,175 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	6.40E-06 lb/MMBtu	AP-42, Table 3.1-3	2,373 hr/yr	0.0006 tpy	8,760 hr/yr	0.0006 tpy	8,160 hr/yr	0.002 tpy
33	Gas Turbine #4	Diesel	7.70 MW	N A	NA	19 hr/yr	0 tpy	8,760 hr/yr	0.002 tpy ⁵	600 hr/yr	0 tpy
		Fuel Gas	8.25 MW	6.40E-06 lb/MMBtu	AP-42, Table 3.1-3	6,864 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	7.88E-06 lb/MMBtu	AP-42, Table 3.4-3	41 hr/yr	3.79E-06 tpy	8,760 hr/yr	8.1E-04 tpy	2,000 hr/yr	1.8E-04 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	1.00E-02 lb/MMscf	VCAPCD	27 MMscf/yr	1.4E-04 tpy	365 days/yr	6.6E-04 tpy	365 days/yr	6.6E-04 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	1.00E-02 lb/MMscf	VCAPCD			365 days/yr	0.01 tpy	98 MMscf/yr	4.9E-04 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	2,318 hr/yr	4.06E-04 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	2,292 hr/yr	4.02E-04 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	7.88E-06 lb/MMBtu	AP-42, Table 3.4-3	46 hr/yr	1.90E-06 tpy	8,760 hr/yr	0.0004 tpy	500 hr/yr	2.06E-05 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	7.88E-06 lb/MMBtu	AP-42, Table 3.4-3	49 hr/yr	4.53E-06 tpy	8,760 hr/yr	0.0008 tpy	8,760 hr/yr	0.0008 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	7.88E-06 lb/MMBtu	AP-42, Table 3.4-3	29 hr/yr	2.91E-06 tpy	8,760 hr/yr	0.0009 tpy	2,000 hr/yr	0.0002 tpy
50	Fire Water Pump	Diesel	183 bhp	9.25E-05 lb/MMBtu	AP-42, Table 3.3-2	30 hr/yr	1.78E-06 tpy	8,760 hr/yr	0.0005 tpy	100 hr/yr	5.92E-06 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	4,091 hr/yr	0.001 tpy	8,760 hr/yr	0.04 tpy	8,760 hr/yr	0.04 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	1,199 hr/yr	0.0002 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	1,199 hr/yr	0.0002 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	267 hr/yr	4.68E-05 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	892 hr/yr	0.0002 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	9.25E-05 lb/MMBtu	AP-42, Table 3.3-2	137 hr/yr	1.87E-05 tpy	8,760 hr/yr	0.00 tpy	8,760 hr/yr	0.00 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	9.25E-05 lb/MMBtu	AP-42, Table 3.3-2	11 hr/yr	1.14E-06 tpy	8,760 hr/yr	0.0009 tpy	8,760 hr/yr	0.0009 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	9.25E-05 lb/MMBtu	AP-42, Table 3.3-2	11 hr/yr	1.14E-06 tpy	8,760 hr/yr	0.0009 tpy	8,760 hr/yr	0.0009 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	704 hr/yr	0.0001 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	2,028 hr/yr	0.0004 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	1,408 hr/yr	0.0002 tpy	8,760 hr/yr	0.07 tpy	8,760 hr/yr	0.07 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	0.07 tpy	8,760 hr/yr	0.07 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	0.04 tpy	8,760 hr/yr	0.04 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3,300 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	3,105 hr/yr	0.001 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
99a	Rig Boiler #2	Diesel	3,300 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	2,261 hr/yr	0.0004 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	4,908 hr/yr	0.001 tpy	8,760 hr/yr	0.06 tpy	8,760 hr/yr	0.06 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	4,244 hr/yr	0.001 tpy	8,760 hr/yr	0.08 tpy	8,760 hr/yr	0.08 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	0.10 tpy	55 days/yr	0.01 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	0.4 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	0.15 tpy	55 days/yr	0.02 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-19. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Acrolein ¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Acrolein							0.013 tpy		0.95 tpy		0.72 tpy

Notes:

¹ Not excluded from the definition of volatile organic compounds under 40 CFR 50.100(s).

² Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	AP-42, Table 3.1-3	6.40E-06 lb/MMBtu
Diesel-Fired Turbines	NA	N A
Flares	VCAPCD	1.00E-02 lb/MMscf
Diesel-Fired Engines, <600 hp	AP-42, Table 3.3-2	9.25E-05 lb/MMBtu
Diesel-Fired Engines, >600 hp	AP-42, Table 3.4-3	7.88E-06 lb/MMBtu
Diesel-Fired Heaters	VCAPCD	0.3506 lb/10 ³ gal
Gas-Fired Heaters	NA	N A
Incinerators	NA	N A

VCAPCD: Ventura County Air Pollution Control District, AB 2588

³ Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-20. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Benzene ¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	1.20E-05 lb/MMBtu	AP-42, Table 3.1-3	8,526 hr/yr	0.004 tpy	8,760 hr/yr	0.004 tpy	8,760 hr/yr	0.004 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	1.20E-05 lb/MMBtu	AP-42, Table 3.1-3	8,175 hr/yr	0.004 tpy	8,760 hr/yr	0.004 tpy	8,760 hr/yr	0.004 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	1.20E-05 lb/MMBtu	AP-42, Table 3.1-3	2,373 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy
33	Dual Fuel Turbine #3	Diesel	7.70 MW	5.50E-05 lb/MMBtu	AP-42, Table 3.1-4	19 hr/yr	4.06E-05 tpy	8,760 hr/yr	0.02 tpy ⁵	8,760 hr/yr	0.001 tpy
	Gas Turbine #4	Fuel Gas	8.25 MW	1.20E-05 lb/MMBtu	AP-42, Table 3.1-3	6,864 hr/yr	0.003 tpy	8,760 hr/yr	0.004 tpy	8,760 hr/yr	0.004 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	7.76E-04 lb/MMBtu	AP-42, Table 3.4-3	41 hr/yr	0.0004 tpy	8,760 hr/yr	0.08 tpy	2,000 hr/yr	0.02 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMsct/day	1.59E-01 lb/MMscf	VCAPCD	27 MMsct/yr	0.002 tpy	365 days/yr	0.01 tpy	365 days/yr	0.01 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMsct/day	1.59E-01 lb/MMscf	VCAPCD			365 days/yr	0.2 tpy	98 MMsct/yr	0.008 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	2,318 hr/yr	5.10E-06 tpy	8,760 hr/yr	1.9E-04 tpy	8,760 hr/yr	1.9E-04 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	2,292 hr/yr	5.04E-06 tpy	8,760 hr/yr	1.9E-04 tpy	8,760 hr/yr	1.9E-04 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	2.10E-03 lb/MMscf	AP-42, Table 1.4-3	0 hr/yr	0 tpy	8,760 hr/yr	8.6E-05 tpy	8,760 hr/yr	8.6E-05 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	7.76E-04 lb/MMBtu	AP-42, Table 3.4-3	46 hr/yr	0.0002 tpy	8,760 hr/yr	0.04 tpy	500 hr/yr	0.002 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	7.76E-04 lb/MMBtu	AP-42, Table 3.4-3	49 hr/yr	0.0004 tpy	8,760 hr/yr	0.08 tpy	8,760 hr/yr	0.08 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	7.76E-04 lb/MMBtu	AP-42, Table 3.4-3	29 hr/yr	0.0003 tpy	8,760 hr/yr	0.09 tpy	2,000 hr/yr	0.02 tpy
50	Fire Water Pump	Diesel	183 bhp	9.33E-04 lb/MMBtu	AP-42, Table 3.3-2	30 hr/yr	1.79E-05 tpy	8,760 hr/yr	0.005 tpy	100 hr/yr	6.0E-05 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	4,091 hr/yr	9.00E-06 tpy	8,760 hr/yr	4.9E-04 tpy	8,760 hr/yr	4.9E-04 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	1,199 hr/yr	2.64E-06 tpy	8,760 hr/yr	3.5E-04 tpy	8,760 hr/yr	3.5E-04 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	1,199 hr/yr	2.64E-06 tpy	8,760 hr/yr	3.5E-04 tpy	8,760 hr/yr	3.5E-04 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	267 hr/yr	5.87E-07 tpy	8,760 hr/yr	1.3E-04 tpy	8,760 hr/yr	1.3E-04 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	892 hr/yr	1.96E-06 tpy	8,760 hr/yr	1.3E-04 tpy	8,760 hr/yr	1.3E-04 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	9.33E-04 lb/MMBtu	AP-42, Table 3.3-2	137 hr/yr	1.9E-04 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	9.33E-04 lb/MMBtu	AP-42, Table 3.3-2	11 hr/yr	1.15E-05 tpy	8,760 hr/yr	0.009 tpy	8,760 hr/yr	0.009 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	9.33E-04 lb/MMBtu	AP-42, Table 3.3-2	11 hr/yr	1.15E-05 tpy	8,760 hr/yr	0.009 tpy	8,760 hr/yr	0.009 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMsct/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	704 hr/yr	1.55E-06 tpy	8,760 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	2,028 hr/yr	4.46E-06 tpy	8,760 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	1,408 hr/yr	3.10E-06 tpy	8,760 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	3,105 hr/yr	6.83E-06 tpy	8,760 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	2,261 hr/yr	4.97E-06 tpy	8,760 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	4,908 hr/yr	1.08E-05 tpy	8,760 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	4,244 hr/yr	9.34E-06 tpy	8,760 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	0.001 tpy	55 days/yr	1.8E-04 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	0.002 tpy	55 days/yr	2.9E-04 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

**Table D-20. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Benzene ¹**

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Benzene						8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.6 tpy	8,760 hr/yr	0.2 tpy

Notes:

¹ Not excluded from the definition of volatile organic compounds under 40 CFR 50.100(s).

² Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	AP-42, Table 3.1-3	1.20E-05 lb/MMBtu
Diesel-Fired Turbines	AP-42, Table 3.1-4	5.50E-05 lb/MMBtu
Flares	VCAPCD	1.59E-01 lb/MMscf
Diesel-Fired Engines, <600 hp	AP-42, Table 3.3-2	9.33E-04 lb/MMBtu
Diesel-Fired Engines, >600 hp	AP-42, Table 3.4-3	7.76E-04 lb/MMBtu
Diesel-Fired Heaters	VCAPCD	4.40E-03 lb/10 ³ gal
Gas-Fired Heaters	AP-42, Table 1.4-3	2.10E-03 lb/MMscf
Incinerators	NA	N A

VCAPCD: Ventura County Air Pollution Control District, AB 2588

³ Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-21. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Ethylbenzene¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (Operation/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	3.20E-05 lb/MMBtu	AP-42, Table 3.1-3	8,526 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	3.20E-05 lb/MMBtu	AP-42, Table 3.1-3	8,175 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
32	Dual Gas Turbine #3	Fuel Gas	8.25 MW	3.20E-05 lb/MMBtu	AP-42, Table 3.1-3	2,373 hr/yr	0.003 tpy	8,760 hr/yr	0.01 tpy ⁵	8,160 hr/yr	0.01 tpy
33	Gas Turbine #4	Diesel	7.70 MW	N A	NA	19 hr/yr	0 tpy	8,760 hr/yr	0.01 tpy	600 hr/yr	0 tpy
		Fuel Gas	8.25 MW	3.20E-05 lb/MMBtu	AP-42, Table 3.1-3	6,864 hr/yr	0.009 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	N A	NA	41 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	1.44E+00 lb/MMscf	VCAPCD	27 MMscf/yr	0.02 tpy	365 days/yr	0.09 tpy	365 days/yr	0.09 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	1.44E+00 lb/MMscf	VCAPCD			365 days/yr	2.0 tpy	98 MMscf/yr	0.07 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	2,318 hr/yr	2.32E-07 tpy	8,760 hr/yr	8.5E-06 tpy	8,760 hr/yr	8.5E-06 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	2,292 hr/yr	2.29E-07 tpy	8,760 hr/yr	8.5E-06 tpy	8,760 hr/yr	8.5E-06 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	N A	NA	46 hr/yr	0 tpy	8,760 hr/yr	0 tpy	500 hr/yr	0 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	N A	NA	49 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	N A	NA	29 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
50	Fire Water Pump	Diesel	183 bhp	N A	NA	30 hr/yr	0 tpy	8,760 hr/yr	0 tpy	100 hr/yr	0 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	4,091 hr/yr	4.09E-07 tpy	8,760 hr/yr	2.2E-05 tpy	8,760 hr/yr	2.2E-05 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	1,199 hr/yr	1.20E-07 tpy	8,760 hr/yr	1.6E-05 tpy	8,760 hr/yr	1.6E-05 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	1,199 hr/yr	1.20E-07 tpy	8,760 hr/yr	1.6E-05 tpy	8,760 hr/yr	1.6E-05 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	267 hr/yr	2.67E-08 tpy	8,760 hr/yr	5.9E-06 tpy	8,760 hr/yr	5.9E-06 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	892 hr/yr	8.92E-08 tpy	8,760 hr/yr	5.9E-06 tpy	8,760 hr/yr	5.9E-06 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	N A	NA	137 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	704 hr/yr	7.04E-08 tpy	8,760 hr/yr	3.1E-05 tpy	8,760 hr/yr	3.1E-05 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	2,028 hr/yr	2.03E-07 tpy	8,760 hr/yr	3.1E-05 tpy	8,760 hr/yr	3.1E-05 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	1,408 hr/yr	1.41E-07 tpy	8,760 hr/yr	3.8E-05 tpy	8,760 hr/yr	3.8E-05 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	3.8E-05 tpy	8,760 hr/yr	3.8E-05 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	2.3E-05 tpy	8,760 hr/yr	2.3E-05 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	3,105 hr/yr	3.11E-07 tpy	8,760 hr/yr	3.0E-05 tpy	8,760 hr/yr	3.0E-05 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	2,261 hr/yr	2.26E-07 tpy	8,760 hr/yr	3.0E-05 tpy	8,760 hr/yr	3.0E-05 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	4,908 hr/yr	4.91E-07 tpy	8,760 hr/yr	3.2E-05 tpy	8,760 hr/yr	3.2E-05 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	4,244 hr/yr	4.24E-07 tpy	8,760 hr/yr	4.6E-05 tpy	8,760 hr/yr	4.6E-05 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	5.5E-05 tpy	55 days/yr	8.3E-06 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	2.00E-04 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	8.7E-05 tpy	55 days/yr	1.3E-05 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-21. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Ethylbenzene ¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Ethylbenzene							0.05 tpy		2.1 tpy		0.2 tpy

Notes:

¹ Not excluded from the definition of volatile organic compounds under 40 CFR 50.100(s).

² Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	AP-42, Table 3.1-3	3.20E-05 lb/MMBtu
Diesel-Fired Turbines	NA	N A
Flares	VCAPCD	1.44 lb/MMscf
Diesel-Fired Engines, <600 hp	NA	N A
Diesel-Fired Engines, >600 hp	NA	N A
Diesel-Fired Heaters	VCAPCD	2.00E-04 lb/10 ³ gal
Gas-Fired Heaters	NA	N A
Incinerators	NA	N A

VCAPCD: Ventura County Air Pollution Control District, AB 2588

³ Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-22. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TPV02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Formaldehyde ¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/Consumption ⁴		Operation/Consumption		Operation/Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	7.10E-04 lb/MMBtu	AP-42, Table 3.1-3	8,526 hr/yr	0.3 tpy	8,760 hr/yr	0.3 tpy	8,760 hr/yr	0.3 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	7.10E-04 lb/MMBtu	AP-42, Table 3.1-3	8,175 hr/yr	0.2 tpy	8,760 hr/yr	0.3 tpy	8,760 hr/yr	0.3 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	7.10E-04 lb/MMBtu	AP-42, Table 3.1-3	2,373 hr/yr	0.07 tpy	8,760 hr/yr	0.3 tpy ⁵	8,160 hr/yr	0.2 tpy
		Diesel	7.70 MW	2.80E-04 lb/MMBtu	AP-42, Table 3.1-4	19 hr/yr	0.0002 tpy			800 hr/yr	0.007 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	7.10E-04 lb/MMBtu	AP-42, Table 3.1-3	6,864 hr/yr	0.2 tpy	8,760 hr/yr	0.3 tpy	8,760 hr/yr	0.3 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	7.89E-05 lb/MMBtu	AP-42, Table 3.4-3	41 hr/yr	3.80E-05 tpy	8,760 hr/yr	0.008 tpy	2,000 hr/yr	0.002 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	1.17E+00 lb/MMscf	VCAPCD			365 days/yr	0.08 tpy	365 days/yr	0.08 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	1.17E+00 lb/MMscf	VCAPCD	27 MMscf/yr	0.02 tpy	365 days/yr	1.6 tpy	98 MMscf/yr	0.06 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	2,318 hr/yr	0.0006 tpy	8,760 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	2,292 hr/yr	0.0005 tpy	8,760 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	7.50E-02 lb/MMscf	AP-42, Table 1.4-3	0 hr/yr	0 tpy	8,760 hr/yr	0.003 tpy	8,760 hr/yr	0.003 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	7.89E-05 lb/MMBtu	AP-42, Table 3.4-3	46 hr/yr	1.90E-05 tpy	8,760 hr/yr	0.004 tpy	500 hr/yr	0.0002 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	7.89E-05 lb/MMBtu	AP-42, Table 3.4-3	49 hr/yr	4.53E-05 tpy	8,760 hr/yr	0.008 tpy	8,760 hr/yr	0.008 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	7.89E-05 lb/MMBtu	AP-42, Table 3.4-3	29 hr/yr	2.91E-05 tpy	8,760 hr/yr	0.009 tpy	2,000 hr/yr	0.002 tpy
50	Fire Water Pump	Diesel	183 bhp	1.18E-03 lb/MMBtu	AP-42, Table 3.3-2	30 hr/yr	2.27E-05 tpy	8,760 hr/yr	0.007 tpy	100 hr/yr	7.56E-05 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	4,091 hr/yr	0.003 tpy	8,760 hr/yr	0.005 tpy	8,760 hr/yr	0.005 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	1,199 hr/yr	5.3E-04 tpy	8,760 hr/yr	0.004 tpy	8,760 hr/yr	0.004 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	1,199 hr/yr	5.3E-04 tpy	8,760 hr/yr	0.004 tpy	8,760 hr/yr	0.004 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	267 hr/yr	4.40E-05 tpy	8,760 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	892 hr/yr	1.5E-04 tpy	8,760 hr/yr	0.001 tpy	8,760 hr/yr	0.001 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	1.18E-03 lb/MMBtu	AP-42, Table 3.3-2	137 hr/yr	2.4E-04 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	1.18E-03 lb/MMBtu	AP-42, Table 3.3-2	11 hr/yr	1.45E-05 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	1.18E-03 lb/MMBtu	AP-42, Table 3.3-2	11 hr/yr	1.45E-05 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	704 hr/yr	0.0006 tpy	8,760 hr/yr	0.007 tpy	8,760 hr/yr	0.007 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	2,028 hr/yr	0.002 tpy	8,760 hr/yr	0.007 tpy	8,760 hr/yr	0.007 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	1,408 hr/yr	0.002 tpy	8,760 hr/yr	0.009 tpy	8,760 hr/yr	0.009 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	0 hr/yr	0 tpy	8,760 hr/yr	0.009 tpy	8,760 hr/yr	0.009 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	0 hr/yr	0 tpy	8,760 hr/yr	0.006 tpy	8,760 hr/yr	0.006 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3,300 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	3,105 hr/yr	0.003 tpy	8,760 hr/yr	0.007 tpy	8,760 hr/yr	0.007 tpy
99a	Rig Boiler #2	Diesel	3,300 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	2,261 hr/yr	0.002 tpy	8,760 hr/yr	0.007 tpy	8,760 hr/yr	0.007 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	4,908 hr/yr	0.004 tpy	8,760 hr/yr	0.008 tpy	8,760 hr/yr	0.008 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	4,244 hr/yr	0.005 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	0 hr/yr	0 tpy	8,760 hr/yr	0.01 tpy	55 days/yr	0.002 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	6.10E-02 lb/kgal	AP-42, Table 1.3-8	0 hr/yr	0 tpy	8,760 hr/yr	0.02 tpy	55 days/yr	0.003 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-22. Eni US Operating Co. Inc. - Nikaitchuk Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Formaldehyde ¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Stop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Stop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Stop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Stop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Stop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Stop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Stop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Stop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Stop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Stop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	Diesel	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Formaldehyde							0.8 tpy		2.9 tpy		1.3 tpy

Notes:

¹ Not excluded from the definition of volatile organic compounds under 40 CFR 50.100(s).

² Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	AP-42, Table 3.1-3	7.10E-04 lb/MMBtu
Diesel-Fired Turbines	AP-42, Table 3.1-4	2.80E-04 lb/MMBtu
Flares	VCAPCD	1.17E+00 lb/MMscf
Diesel-Fired Engines, <600 hp	AP-42, Table 3.3-2	1.18E-03 lb/MMBtu
Diesel-Fired Engines, >600 hp	AP-42, Table 3.4-3	7.89E-05 lb/MMBtu
Diesel-Fired Heaters	AP-42, Table 1.3-8	6.10E-02 lb/kgal
Gas-Fired Heaters	AP-42, Table 1.4-3	7.50E-02 lb/MMscf
Incinerators	NA	N A

VCAPCD: Ventura County Air Pollution Control District, AB 2588

³ Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-23. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Hexane¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴	Limitations ³	Operation/ Consumption	Limitations ³	Operation/ Consumption	Limitations ³
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	N A	NA	8,526 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	N A	NA	8,175 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	N A	NA	2,373 hr/yr	0 tpy	8,760 hr/yr	0 tpy ⁵	8,160 hr/yr	0 tpy
		Diesel	7.70 MW	N A	NA	19 hr/yr	0 tpy	8,760 hr/yr	0 tpy	600 hr/yr	0 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	N A	NA	6,864 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	N A	NA	41 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	2.90E-02 lb/MMscf	VCAPCD	27 MMscf/yr	0.0004 tpy	365 days/yr	0.002 tpy	365 days/yr	0.002 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	2.90E-02 lb/MMscf	VCAPCD			365 days/yr	0.04 tpy	98 MMscf/yr	0.001 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	2,318 hr/yr	4.06E-06 tpy	8,760 hr/yr	1.5E-04 tpy	8,760 hr/yr	1.5E-04 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	2,292 hr/yr	4.01E-06 tpy	8,760 hr/yr	1.5E-04 tpy	8,760 hr/yr	1.5E-04 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	1.8 lb/MMscf	AP-42, Table 1.4-3	0 hr/yr	0 tpy	8,760 hr/yr	8.4E-06 tpy	8,760 hr/yr	8.4E-06 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	N A	NA	46 hr/yr	0 tpy	8,760 hr/yr	0 tpy	500 hr/yr	0 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	N A	NA	49 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	N A	NA	29 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
50	Fire Water Pump	Diesel	183 bhp	N A	NA	30 hr/yr	0 tpy	8,760 hr/yr	0 tpy	100 hr/yr	0 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	4,091 hr/yr	7.16E-06 tpy	8,760 hr/yr	3.9E-04 tpy	8,760 hr/yr	3.9E-04 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	1,199 hr/yr	2.10E-06 tpy	8,760 hr/yr	2.8E-04 tpy	8,760 hr/yr	2.8E-04 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	1,199 hr/yr	2.10E-06 tpy	8,760 hr/yr	2.8E-04 tpy	8,760 hr/yr	2.8E-04 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	267 hr/yr	4.67E-07 tpy	8,760 hr/yr	1.0E-04 tpy	8,760 hr/yr	1.0E-04 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	892 hr/yr	1.56E-06 tpy	8,760 hr/yr	1.0E-04 tpy	8,760 hr/yr	1.0E-04 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	N A	NA	137 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	704 hr/yr	1.23E-06 tpy	8,760 hr/yr	5.3E-04 tpy	8,760 hr/yr	5.3E-04 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	2,028 hr/yr	3.55E-06 tpy	8,760 hr/yr	5.3E-04 tpy	8,760 hr/yr	5.3E-04 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	1,408 hr/yr	2.46E-06 tpy	8,760 hr/yr	6.7E-04 tpy	8,760 hr/yr	6.7E-04 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	6.7E-04 tpy	8,760 hr/yr	6.7E-04 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	4.0E-04 tpy	8,760 hr/yr	4.0E-04 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	3,105 hr/yr	5.43E-06 tpy	8,760 hr/yr	5.3E-04 tpy	8,760 hr/yr	5.3E-04 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	2,261 hr/yr	3.96E-06 tpy	8,760 hr/yr	5.3E-04 tpy	8,760 hr/yr	5.3E-04 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	4,908 hr/yr	8.59E-06 tpy	8,760 hr/yr	5.6E-04 tpy	8,760 hr/yr	5.6E-04 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	4,244 hr/yr	7.43E-06 tpy	8,760 hr/yr	8.0E-04 tpy	8,760 hr/yr	8.0E-04 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	9.6E-04 tpy	55 days/yr	1.4E-04 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	3.50E-03 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	1.5E-03 tpy	55 days/yr	2.3E-04 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-23. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Hexane¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Hexane							0.0004 tpy		0.05 tpy		0.010 tpy

Notes:

¹ Not excluded from the definition of volatile organic compounds under 40 CFR 50.100(s).

² Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	NA	N A
Diesel-Fired Turbines	NA	N A
Flares	VCAPCD	2.90E-02 lb/MMscf
Diesel-Fired Engines, <600 hp	NA	N A
Diesel-Fired Engines, >600 hp	NA	N A
Diesel-Fired Heaters	VCAPCD	3.50E-03 lb/10 ³ gal
Gas-Fired Heaters	AP-42, Table 1.4-3	1.80E+00 lb/MMscf
Incinerators	NA	N A

VCAPCD: Ventura County Air Pollution Control District, AB 2588

³ Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-25. Eni US Operating Co. Inc. - Nikaitchuk Development
Renewal Application for Title V Operating Permit No. AQ0923TPV02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Propylene Oxide¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	2.90E-05 lb/MMBtu	AP-42, Table 3.1-3	8,526 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	2.90E-05 lb/MMBtu	AP-42, Table 3.1-3	8,175 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	2.90E-05 lb/MMBtu	AP-42, Table 3.1-3	2,373 hr/yr	0.003 tpy	8,760 hr/yr	0.01 tpy ⁵	8,160 hr/yr	0.01 tpy
33	Gas Turbine #4	Diesel	7.70 MW	N A	NA	19 hr/yr	0 tpy	8,760 hr/yr	0.01 tpy	600 hr/yr	0 tpy
3	OPP Standby Generator - Reciprocating Engine	Fuel Gas	8.25 MW	2.90E-05 lb/MMBtu	AP-42, Table 3.1-3	6,864 hr/yr	0.008 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
	Diesel	2.50 MW	N A	NA	NA	41 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	N A	NA	27 MMscf/yr	0 tpy	365 days/yr	0 tpy	365 days/yr	0 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	N A	NA			365 days/yr	0 tpy	98 MMscf/yr	0 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	N A	NA	2,318 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	N A	NA	2,292 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	N A	NA	46 hr/yr	0 tpy	8,760 hr/yr	0 tpy	500 hr/yr	0 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	N A	NA	49 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	N A	NA	29 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
50	Fire Water Pump	Diesel	183 bhp	N A	NA	30 hr/yr	0 tpy	8,760 hr/yr	0 tpy	100 hr/yr	0 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	N A	NA	4,091 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	N A	NA	1,199 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	N A	NA	1,199 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	N A	NA	267 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	N A	NA	892 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	N A	NA	137 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	N A	NA	704 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	N A	NA	2,028 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	N A	NA	1,408 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3,300 MMBtu/hr	N A	NA	3,105 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
99a	Rig Boiler #2	Diesel	3,300 MMBtu/hr	N A	NA	2,261 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	N A	NA	4,908 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	N A	NA	4,244 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	55 days/yr	0 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	55 days/yr	0 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-25. Eni US Operating Co. Inc. - Nikaitchuk Development
Renewal Application for Title V Operating Permit No. AQ0923TPV02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Propylene Oxide ¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Propylene Oxide							0.03 tpy		0.04 tpy		0.04 tpy

Notes:

¹ Not excluded from the definition of volatile organic compounds under 40 CFR 50.100(s).

² Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	AP-42, Table 3.1-3	2.9E-05 lb/MMBtu
Diesel-Fired Turbines	NA	N A
Flares	NA	N A
Diesel-Fired Engines, <600 hp	NA	N A
Diesel-Fired Engines, >600 hp	NA	N A
Diesel-Fired Heaters	NA	N A
Gas-Fired Heaters	NA	N A
Incinerators	NA	N A

³ Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-26. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Toluene ¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	1.30E-04 lb/MMBtu	AP-42, Table 3.1-3	8,526 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	1.30E-04 lb/MMBtu	AP-42, Table 3.1-3	8,175 hr/yr	0.04 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	1.30E-04 lb/MMBtu	AP-42, Table 3.1-3	2,373 hr/yr	0.01 tpy	8,760 hr/yr	0.05 tpy ⁵	8,160 hr/yr	0.04 tpy
		Diesel	7.70 MW	N A	NA	19 hr/yr	0 tpy			600 hr/yr	0 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	1.30E-04 lb/MMBtu	AP-42, Table 3.1-3	6,864 hr/yr	0.04 tpy	8,760 hr/yr	0.05 tpy	8,760 hr/yr	0.05 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	2.81E-04 lb/MMBtu	AP-42, Table 3.4-3	41 hr/yr	0.0001 tpy	8,760 hr/yr	0.03 tpy	2,000 hr/yr	0.007 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	5.80E-02 lb/MMscf	VCAPCD	27 MMscf/yr	0.0008 tpy	365 days/yr	0.004 tpy	365 days/yr	0.004 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	5.80E-02 lb/MMscf	VCAPCD			365 days/yr	0.08 tpy	98 MMscf/yr	0.003 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	2,318 hr/yr	5.10E-06 tpy	8,760 hr/yr	1.9E-04 tpy	8,760 hr/yr	1.9E-04 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	2,292 hr/yr	5.04E-06 tpy	8,760 hr/yr	1.9E-04 tpy	8,760 hr/yr	1.9E-04 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	3.43E-03 lb/MMscf	AP-42, Table 1.4-3	0 hr/yr	0 tpy	8,760 hr/yr	1.4E-04 tpy	8,760 hr/yr	1.4E-04 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	2.81E-04 lb/MMBtu	AP-42, Table 3.4-3	46 hr/yr	6.76E-05 tpy	8,760 hr/yr	0.01 tpy	500 hr/yr	7.4E-04 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	2.81E-04 lb/MMBtu	AP-42, Table 3.4-3	49 hr/yr	0.0002 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	2.81E-04 lb/MMBtu	AP-42, Table 3.4-3	29 hr/yr	0.0001 tpy	8,760 hr/yr	0.03 tpy	2,000 hr/yr	0.007 tpy
50	Fire Water Pump	Diesel	183 bhp	4.09E-04 lb/MMBtu	AP-42, Table 3.3-2	30 hr/yr	7.86E-06 tpy	8,760 hr/yr	0.002 tpy	100 hr/yr	2.62E-05 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	4,091 hr/yr	9.00E-06 tpy	8,760 hr/yr	4.9E-04 tpy	8,760 hr/yr	4.9E-04 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	1,199 hr/yr	2.64E-06 tpy	8,760 hr/yr	3.5E-04 tpy	8,760 hr/yr	3.5E-04 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	1,199 hr/yr	2.64E-06 tpy	8,760 hr/yr	3.5E-04 tpy	8,760 hr/yr	3.5E-04 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	267 hr/yr	5.87E-07 tpy	8,760 hr/yr	1.3E-04 tpy	8,760 hr/yr	1.3E-04 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	892 hr/yr	1.96E-06 tpy	8,760 hr/yr	1.3E-04 tpy	8,760 hr/yr	1.3E-04 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	4.09E-04 lb/MMBtu	AP-42, Table 3.3-2	137 hr/yr	8.28E-05 tpy	8,760 hr/yr	0.005 tpy	8,760 hr/yr	0.005 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	4.09E-04 lb/MMBtu	AP-42, Table 3.3-2	11 hr/yr	5.04E-06 tpy	8,760 hr/yr	0.004 tpy	8,760 hr/yr	0.004 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	4.09E-04 lb/MMBtu	AP-42, Table 3.3-2	11 hr/yr	5.04E-06 tpy	8,760 hr/yr	0.004 tpy	8,760 hr/yr	0.004 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	704 hr/yr	1.55E-06 tpy	8,760 hr/yr	6.7E-04 tpy	8,760 hr/yr	6.7E-04 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	2,028 hr/yr	4.46E-06 tpy	8,760 hr/yr	6.7E-04 tpy	8,760 hr/yr	6.7E-04 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	1,408 hr/yr	3.10E-06 tpy	8,760 hr/yr	8.4E-04 tpy	8,760 hr/yr	8.4E-04 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	8.4E-04 tpy	8,760 hr/yr	8.4E-04 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	5.0E-04 tpy	8,760 hr/yr	5.0E-04 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	3,105 hr/yr	6.83E-06 tpy	8,760 hr/yr	6.6E-04 tpy	8,760 hr/yr	6.6E-04 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	2,261 hr/yr	4.97E-06 tpy	8,760 hr/yr	6.6E-04 tpy	8,760 hr/yr	6.6E-04 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	4,908 hr/yr	1.08E-05 tpy	8,760 hr/yr	7.0E-04 tpy	8,760 hr/yr	7.0E-04 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	4,244 hr/yr	9.34E-06 tpy	8,760 hr/yr	1.0E-03 tpy	8,760 hr/yr	1.0E-03 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oiler Boiler / Heater #1	Diesel	6 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	1.2E-03 tpy	55 days/yr	1.8E-04 tpy
24	Hot Oiler Boiler / Heater #2	Diesel	9.5 MMBtu/hr	4.40E-03 lb/10 ³ gal	VCAPCD	0 hr/yr	0 tpy	8,760 hr/yr	1.9E-03 tpy	55 days/yr	2.9E-04 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

**Table D-26. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Toluene ¹**

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Toluene							0.1 tpy		0.4 tpy		0.3 tpy

Notes:

¹ Not excluded from the definition of volatile organic compounds under 40 CFR 50.100(s).

² Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	AP-42, Table 3.1-3	1.30E-04 lb/MMBtu
Diesel-Fired Turbines	NA	N A
Flares	VCAPCD	5.80E-02 lb/MMscf
Diesel-Fired Engines, <600 hp	AP-42, Table 3.3-2	4.09E-04 lb/MMBtu
Diesel-Fired Engines, >600 hp	AP-42, Table 3.4-3	2.81E-04 lb/MMBtu
Diesel-Fired Heaters	VCAPCD	4.40E-03 lb/10 ³ gal
Gas-Fired Heaters	AP-42, Table 1.4-3	3.43E-03 lb/MMscf
Incinerators	NA	N A

VCAPCD: Ventura County Air Pollution Control District, AB 2588

³ Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-27. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TPV02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Xylene ¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	6.40E-05 lb/MMBtu	AP-42, Table 3.1-3	8,526 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	6.40E-05 lb/MMBtu	AP-42, Table 3.1-3	8,175 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	6.40E-05 lb/MMBtu	AP-42, Table 3.1-3	2,373 hr/yr	0.006 tpy	8,760 hr/yr	0.02 tpy ⁵	8,160 hr/yr	0.02 tpy
33	Gas Turbine #4	Diesel	7.70 MW	N A	NA	19 hr/yr	0 tpy	8,760 hr/yr	0 tpy	600 hr/yr	0 tpy
3	OPP Standby Generator - Reciprocating Engine	Fuel Gas	8.25 MW	6.40E-05 lb/MMBtu	AP-42, Table 3.1-3	6,864 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
		Diesel	2.50 MW	1.93E-04 lb/MMBtu	AP-42, Table 3.4-3	41 hr/yr	9.28E-05 tpy	8,760 hr/yr	0.02 tpy	2,000 hr/yr	0.005 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	2.90E-02 lb/MMscf	VCAPCD	27 MMscf/yr	0.0004 tpy	365 days/yr	0.002 tpy	365 days/yr	0.002 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	2.90E-02 lb/MMscf	VCAPCD			365 days/yr	0.04 tpy	98 MMscf/yr	0.001 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	N A	NA	2,318 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	N A	NA	2,292 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	1.93E-04 lb/MMBtu	AP-42, Table 3.4-3	46 hr/yr	4.65E-05 tpy	8,760 hr/yr	0.009 tpy	500 hr/yr	0.0005 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	1.93E-04 lb/MMBtu	AP-42, Table 3.4-3	49 hr/yr	0.0001 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	1.93E-04 lb/MMBtu	AP-42, Table 3.4-3	29 hr/yr	7.12E-05 tpy	8,760 hr/yr	0.02 tpy	2,000 hr/yr	0.005 tpy
50	Fire Water Pump	Diesel	183 bhp	2.85E-04 lb/MMBtu	AP-42, Table 3.3-2	30 hr/yr	5.48E-06 tpy	8,760 hr/yr	0.002 tpy	100 hr/yr	1.83E-05 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	N A	NA	4,091 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	N A	NA	1,199 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	N A	NA	1,199 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	N A	NA	267 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	N A	NA	892 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	2.85E-04 lb/MMBtu	AP-42, Table 3.3-2	137 hr/yr	5.77E-05 tpy	8,760 hr/yr	0.004 tpy	8,760 hr/yr	0.004 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	2.85E-04 lb/MMBtu	AP-42, Table 3.3-2	11 hr/yr	3.51E-06 tpy	8,760 hr/yr	0.003 tpy	8,760 hr/yr	0.003 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	2.85E-04 lb/MMBtu	AP-42, Table 3.3-2	11 hr/yr	3.51E-06 tpy	8,760 hr/yr	0.003 tpy	8,760 hr/yr	0.003 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	N A	NA	704 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	N A	NA	2,028 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	N A	NA	1,408 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	N A	NA	3,105 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	N A	NA	2,261 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	N A	NA	4,908 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	N A	NA	4,244 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	55 days/yr	0 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	55 days/yr	0 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-27. Eni US Operating Co. Inc. - Nikaitchuk Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Xylene ¹

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Xylene							0.07 tpy		0.2 tpy		0.1 tpy

Notes:

¹ Not excluded from the definition of volatile organic compounds under 40 CFR 50.100(s).

² Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	AP-42, Table 3.1-3	6.40E-05 lb/MMBtu
Diesel-Fired Turbines	NA	N A
Flares	VCAPCD	2.90E-02 lb/MMscf
Diesel-Fired Engines, <600 hp	AP-42, Table 3.3-2	2.85E-04 lb/MMBtu
Diesel-Fired Engines, >600 hp	AP-42, Table 3.4-3	1.93E-04 lb/MMBtu
Diesel-Fired Heaters	NA	N A
Gas-Fired Heaters	NA	N A
Incinerators	NA	N A

VCAPCD: Ventura County Air Pollution Control District, AB 2588

³ Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-28. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Arsenic

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	N A	NA	8,526 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	N A	NA	8,175 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	N A	NA	2,373 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,160 hr/yr	0 tpy
33		Diesel	7.70 MW	1.10E-05 lb/MMBtu	AP-42, Table 3.1-5	19 hr/yr	8.13E-06 tpy	8,760 hr/yr	0.004 tpy ⁴	600 hr/yr	0.0003 tpy
32	Gas Turbine #4	Fuel Gas	8.25 MW	N A	NA	6,864 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	N A	NA	41 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	N A	NA	27 MMscf/yr	0 tpy	365 days/yr	0 tpy	365 days/yr	0 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	N A	NA			365 days/yr	0 tpy	98 MMscf/yr	0 tpy
70	OPP W/F Boiler #2	Diesel	0.935 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,318 hr/yr	4.33E-06 tpy	8,760 hr/yr	1.64E-05 tpy	8,760 hr/yr	1.64E-05 tpy
71	OPP W/F Boiler #3	Diesel	0.935 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,292 hr/yr	4.29E-06 tpy	8,760 hr/yr	1.64E-05 tpy	8,760 hr/yr	1.64E-05 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	2.0E-04 lb/MMscf	AP-42, Table 1.4-4	0 hr/yr	0 tpy	8,760 hr/yr	8.15E-06 tpy	8,760 hr/yr	8.15E-06 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	N A	NA	46 hr/yr	0 tpy	8,760 hr/yr	0 tpy	500 hr/yr	0 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	N A	NA	49 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	N A	NA	29 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
50	Fire Water Pump	Diesel	183 bhp	N A	NA	30 hr/yr	0 tpy	8,760 hr/yr	0 tpy	100 hr/yr	0 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,091 hr/yr	1.99E-05 tpy	8,760 hr/yr	4.26E-05 tpy	8,760 hr/yr	4.26E-05 tpy
109	SID W/F Boiler #1	Diesel	1.73 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	4.15E-06 tpy	8,760 hr/yr	3.03E-05 tpy	8,760 hr/yr	3.03E-05 tpy
110	SID W/F Boiler #2	Diesel	1.73 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	4.15E-06 tpy	8,760 hr/yr	3.03E-05 tpy	8,760 hr/yr	3.03E-05 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	267 hr/yr	3.47E-07 tpy	8,760 hr/yr	1.14E-05 tpy	8,760 hr/yr	1.14E-05 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	892 hr/yr	1.16E-06 tpy	8,760 hr/yr	1.14E-05 tpy	8,760 hr/yr	1.14E-05 tpy
64	SID W/F Generator Reciprocating Engine	Diesel	422 bhp	N A	NA	137 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	704 hr/yr	4.72E-06 tpy	8,760 hr/yr	5.87E-05 tpy	8,760 hr/yr	5.87E-05 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,028 hr/yr	1.36E-05 tpy	8,760 hr/yr	5.87E-05 tpy	8,760 hr/yr	5.87E-05 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,408 hr/yr	1.18E-05 tpy	8,760 hr/yr	7.36E-05 tpy	8,760 hr/yr	7.36E-05 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	7.36E-05 tpy	8,760 hr/yr	7.36E-05 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	4.38E-05 tpy	8,760 hr/yr	4.38E-05 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	3,105 hr/yr	2.05E-05 tpy	8,760 hr/yr	5.78E-05 tpy	8,760 hr/yr	5.78E-05 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,261 hr/yr	1.49E-05 tpy	8,760 hr/yr	5.78E-05 tpy	8,760 hr/yr	5.78E-05 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,908 hr/yr	3.44E-05 tpy	8,760 hr/yr	6.13E-05 tpy	8,760 hr/yr	6.13E-05 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,244 hr/yr	4.24E-05 tpy	8,760 hr/yr	8.76E-05 tpy	8,760 hr/yr	8.76E-05 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	1.05E-04 tpy	55 days/yr	1.58E-05 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	4 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	1.66E-04 tpy	55 days/yr	2.51E-05 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	W/F Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	W/F Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

**Table D-28. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Arsenic**

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
NA	W/F Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Arsenic							0.0002 tpy		0.005 tpy		0.001 tpy

Notes:

¹ Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	NA	N A
Diesel-Fired Turbines	AP-42, Table 3.1-5	1.10E-05 lb/MMBtu
Flares	NA	N A
Diesel-Fired Engines, <600 hp	NA	N A
Diesel-Fired Engines, >600 hp	NA	N A
Diesel-Fired Heaters	AP-42, Table 1.3-10	4.00E+00 lb/10 ¹² Btu
Gas-Fired Heaters	AP-42, Table 1.4-4	2.00E-04 lb/MMscf
Incinerators	AP-42, Table 2.1-2	4.37E-03 lb/ton

² Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-29. Eni US Operating Co. Inc. - Nikaitchuk Development
Renewal Application for Title V Operating Permit No. AQ0923TPV02
Stationary Source Emissions Summary - Base Scenario
Annual Emissions - Hazardous Air Pollutants: Barium

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	N A	NA	8,526 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	N A	NA	8,175 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	N A	NA	2,373 hr/yr	0 tpy	8,760 hr/yr	0 tpy ⁴	8,160 hr/yr	0 tpy
		Diesel	7.70 MW	N A	NA	19 hr/yr	0 tpy			600 hr/yr	0 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	N A	NA	6,864 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	N A	NA	41 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	N A	NA	27 MMscf/yr	0 tpy	365 days/yr	0 tpy	365 days/yr	0 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	N A	NA			365 days/yr	0 tpy	98 MMscf/yr	0 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	N A	NA	2,318 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	N A	NA	2,292 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	4.40E-03 lb/MMscf	AP-42, Table 1.4-4	0 hr/yr	0 tpy	8,760 hr/yr	0.0002 tpy	8,760 hr/yr	0.0002 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	N A	NA	46 hr/yr	0 tpy	8,760 hr/yr	0 tpy	500 hr/yr	0 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	N A	NA	49 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	N A	NA	29 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
50	Fire Water Pump	Diesel	183 bhp	N A	NA	30 hr/yr	0 tpy	8,760 hr/yr	0 tpy	100 hr/yr	0 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	N A	NA	4,091 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	N A	NA	1,199 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	N A	NA	1,199 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	N A	NA	267 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	N A	NA	892 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	N A	NA	137 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	N A	NA	704 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	N A	NA	2,028 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	N A	NA	1,408 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3,300 MMBtu/hr	N A	NA	3,105 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
99a	Rig Boiler #2	Diesel	3,300 MMBtu/hr	N A	NA	2,261 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	N A	NA	4,908 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	N A	NA	4,244 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oil Boiler / Heater #1	Diesel	6 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	55 days/yr	0 tpy
24	Hot Oil Boiler / Heater #2	Diesel	9.5 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	55 days/yr	0 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-29. Eni US Operating Co. Inc. - Nikaitchuk Development
Renewal Application for Title V Operating Permit No. AQ0923TP02
Stationary Source Emissions Summary - Base Scenario
Annual Emissions - Hazardous Air Pollutants: Barium

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Barium							0 tpy		0.0002 tpy		0.0002 tpy

Notes:

¹ Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	NA	N A
Diesel-Fired Turbines	NA	N A
Flares	NA	N A
Diesel-Fired Engines, <600 hp	NA	N A
Diesel-Fired Engines, >600 hp	NA	N A
Diesel-Fired Heaters	NA	N A
Gas-Fired Heaters	AP-42, Table 1.4-4	4.40E-03 lb/MMscf
Incinerators	NA	N A

² Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-30. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Beryllium

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	N A	NA	8,526 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	N A	NA	8,175 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	N A	NA	2,373 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,160 hr/yr	0 tpy
		Diesel	7.70 MW	3.10E-07 lb/MMBtu	AP-42, Table 3.1-5	19 hr/yr	2.29E-07 tpy	8,760 hr/yr	0.0001 tpy ⁴	600 hr/yr	7.23E-06 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	N A	NA	6,864 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	N A	NA	41 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	N A	NA			365 days/yr	0 tpy	365 days/yr	0 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	N A	NA	27 MMscf/yr	0 tpy	365 days/yr	0 tpy	98 MMscf/yr	0 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,318 hr/yr	3.25E-06 tpy	8,760 hr/yr	1.23E-05 tpy	8,760 hr/yr	1.23E-05 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,292 hr/yr	3.21E-06 tpy	8,760 hr/yr	1.23E-05 tpy	8,760 hr/yr	1.23E-05 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	1.20E-05 lb/MMscf	AP-42, Table 1.4-4	0 hr/yr	0 tpy	8,760 hr/yr	4.91E-07 tpy	8,760 hr/yr	4.91E-07 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	N A	NA	46 hr/yr	0 tpy	8,760 hr/yr	0 tpy	500 hr/yr	0 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	N A	NA	49 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	N A	NA	29 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
50	Fire Water Pump	Diesel	183 bhp	N A	NA	30 hr/yr	0 tpy	8,760 hr/yr	0 tpy	100 hr/yr	0 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,091 hr/yr	1.49E-05 tpy	8,760 hr/yr	3.19E-05 tpy	8,760 hr/yr	3.19E-05 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	3.11E-06 tpy	8,760 hr/yr	2.27E-05 tpy	8,760 hr/yr	2.27E-05 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	3.11E-06 tpy	8,760 hr/yr	2.27E-05 tpy	8,760 hr/yr	2.27E-05 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	267 hr/yr	2.60E-07 tpy	8,760 hr/yr	8.53E-06 tpy	8,760 hr/yr	8.53E-06 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	892 hr/yr	8.68E-07 tpy	8,760 hr/yr	8.53E-06 tpy	8,760 hr/yr	8.53E-06 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	N A	NA	137 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	704 hr/yr	3.54E-06 tpy	8,760 hr/yr	4.40E-05 tpy	8,760 hr/yr	4.40E-05 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,028 hr/yr	1.02E-05 tpy	8,760 hr/yr	4.40E-05 tpy	8,760 hr/yr	4.40E-05 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,408 hr/yr	8.87E-06 tpy	8,760 hr/yr	5.52E-05 tpy	8,760 hr/yr	5.52E-05 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	5.52E-05 tpy	8,760 hr/yr	5.52E-05 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	3.29E-05 tpy	8,760 hr/yr	3.29E-05 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	3,105 hr/yr	1.54E-05 tpy	8,760 hr/yr	4.34E-05 tpy	8,760 hr/yr	4.34E-05 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,261 hr/yr	1.12E-05 tpy	8,760 hr/yr	4.34E-05 tpy	8,760 hr/yr	4.34E-05 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,908 hr/yr	2.58E-05 tpy	8,760 hr/yr	4.60E-05 tpy	8,760 hr/yr	4.60E-05 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,244 hr/yr	3.18E-05 tpy	8,760 hr/yr	6.57E-05 tpy	8,760 hr/yr	6.57E-05 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	7.88E-05 tpy	55 days/yr	1.19E-05 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	0.0001 tpy	55 days/yr	1.88E-05 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-30. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Beryllium

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Bicide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Beryllium							0.0001 tpy		0.0009 tpy		0.0006 tpy

Notes:

¹ Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	NA	N A
Diesel-Fired Turbines	AP-42, Table 3.1-5	3.10E-07 lb/MMBtu
Flares	NA	N A
Diesel-Fired Engines, <600 hp	NA	N A
Diesel-Fired Engines, >600 hp	NA	N A
Diesel-Fired Heaters	AP-42, Table 1.3-10	3.00 lb/10 ¹² Btu
Gas-Fired Heaters	AP-42, Table 1.4-4	1.20E-05 lb/MMscf
Incinerators	NA	N A

² Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2022 gas analysis):	1,123 Btu/scf
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

Table D-31. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TPV02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Cadmium

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	N A	NA	8,526 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	N A	NA	8,175 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	N A	NA	2,373 hr/yr	0 tpy	8,760 hr/yr	0.0001 tpy ⁴	8,160 hr/yr	0 tpy
		Diesel	7.70 MW	3.10E-07 lb/MMBtu	AP-42, Table 3.1-5	19 hr/yr	2.29E-07 tpy			600 hr/yr	7.23E-06 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	N A	NA	6,864 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	N A	NA	41 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	N A	NA	27 MMscf/yr	0 tpy	365 days/yr	0 tpy	365 days/yr	0 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	N A	NA			365 days/yr	0 tpy	98 MMscf/yr	0 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,318 hr/yr	3.25E-06 tpy	8,760 hr/yr	1.23E-05 tpy	8,760 hr/yr	1.23E-05 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,292 hr/yr	3.21E-06 tpy	8,760 hr/yr	1.23E-05 tpy	8,760 hr/yr	1.23E-05 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	1.20E-05 lb/MMscf	AP-42, Table 1.4-4	0 hr/yr	0 tpy	8,760 hr/yr	4.89E-07 tpy	8,760 hr/yr	4.89E-07 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	N A	NA	46 hr/yr	0 tpy	8,760 hr/yr	0 tpy	500 hr/yr	0 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	N A	NA	49 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	N A	NA	29 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
50	Fire Water Pump	Diesel	183 bhp	N A	NA	30 hr/yr	0 tpy	8,760 hr/yr	0 tpy	100 hr/yr	0 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,091 hr/yr	1.49E-05 tpy	8,760 hr/yr	3.19E-05 tpy	8,760 hr/yr	3.19E-05 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	3.11E-06 tpy	8,760 hr/yr	2.27E-05 tpy	8,760 hr/yr	2.27E-05 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	3.11E-06 tpy	8,760 hr/yr	2.27E-05 tpy	8,760 hr/yr	2.27E-05 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	267 hr/yr	2.60E-07 tpy	8,760 hr/yr	8.53E-06 tpy	8,760 hr/yr	8.53E-06 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	892 hr/yr	8.68E-07 tpy	8,760 hr/yr	8.53E-06 tpy	8,760 hr/yr	8.53E-06 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	N A	NA	137 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	704 hr/yr	3.54E-06 tpy	8,760 hr/yr	4.40E-05 tpy	8,760 hr/yr	4.40E-05 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,028 hr/yr	1.02E-05 tpy	8,760 hr/yr	4.40E-05 tpy	8,760 hr/yr	4.40E-05 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,408 hr/yr	8.87E-06 tpy	8,760 hr/yr	5.52E-05 tpy	8,760 hr/yr	5.52E-05 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	5.52E-05 tpy	8,760 hr/yr	5.52E-05 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	3.29E-05 tpy	8,760 hr/yr	3.29E-05 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3,300 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	3,105 hr/yr	1.54E-05 tpy	8,760 hr/yr	4.34E-05 tpy	8,760 hr/yr	4.34E-05 tpy
99a	Rig Boiler #2	Diesel	3,300 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,261 hr/yr	1.12E-05 tpy	8,760 hr/yr	4.34E-05 tpy	8,760 hr/yr	4.34E-05 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,908 hr/yr	2.58E-05 tpy	8,760 hr/yr	4.60E-05 tpy	8,760 hr/yr	4.60E-05 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,244 hr/yr	3.18E-05 tpy	8,760 hr/yr	6.57E-05 tpy	8,760 hr/yr	6.57E-05 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oil Boiler / Heater #1	Diesel	6 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	7.88E-05 tpy	55 days/yr	1.19E-05 tpy
24	Hot Oil Boiler / Heater #2	Diesel	9.5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	0.0001 tpy	55 days/yr	1.88E-05 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-31. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Cadmium

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Cadmium							0.0001 tpy		0.0009 tpy		0.0006 tpy

Notes:

¹ Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	NA	N A
Diesel-Fired Turbines	AP-42, Table 3.1-5	3.10E-07 lb/MMBtu
Flares	NA	N A
Diesel-Fired Engines, <600 hp	NA	N A
Diesel-Fired Engines, >600 hp	NA	N A
Diesel-Fired Heaters	AP-42, Table 1.3-10	3.00 lb/10 ¹² Btu
Gas-Fired Heaters	AP-42, Table 1.4-4	1.20E-05 lb/MMscf
Incinerators	NA	N A

² Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-32. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Chromium

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	N A	NA	8,526 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	N A	NA	8,175 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	N A	NA	2,373 hr/yr	0 tpy	8,760 hr/yr	0.004 tpy ⁴	8,160 hr/yr	0 tpy
		Diesel	7.70 MW	1.10E-05 lb/MMBtu	AP-42, Table 3.1-5	19 hr/yr	8.13E-06 tpy			600 hr/yr	0.0003 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	N A	NA	6,864 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	N A	NA	41 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	N A	NA	27 MMscf/yr	0 tpy	365 days/yr	0 tpy	365 days/yr	0 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	N A	NA			365 days/yr	0 tpy	98 MMscf/yr	0 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,318 hr/yr	3.25E-06 tpy	8,760 hr/yr	1.23E-05 tpy	8,760 hr/yr	1.23E-05 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,292 hr/yr	3.21E-06 tpy	8,760 hr/yr	1.23E-05 tpy	8,760 hr/yr	1.23E-05 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	1.40E-03 lb/MMscf	AP-42, Table 1.4-4	0 hr/yr	0 tpy	8,760 hr/yr	5.71E-05 tpy	8,760 hr/yr	5.71E-05 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	N A	NA	46 hr/yr	0 tpy	8,760 hr/yr	0 tpy	500 hr/yr	0 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	N A	NA	49 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	N A	NA	29 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
50	Fire Water Pump	Diesel	183 bhp	N A	NA	30 hr/yr	0 tpy	8,760 hr/yr	0 tpy	100 hr/yr	0 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,091 hr/yr	1.49E-05 tpy	8,760 hr/yr	3.19E-05 tpy	8,760 hr/yr	3.19E-05 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	3.11E-06 tpy	8,760 hr/yr	2.27E-05 tpy	8,760 hr/yr	2.27E-05 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	3.11E-06 tpy	8,760 hr/yr	2.27E-05 tpy	8,760 hr/yr	2.27E-05 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	267 hr/yr	2.60E-07 tpy	8,760 hr/yr	8.53E-06 tpy	8,760 hr/yr	8.53E-06 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	892 hr/yr	8.68E-07 tpy	8,760 hr/yr	8.53E-06 tpy	8,760 hr/yr	8.53E-06 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	N A	NA	137 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	704 hr/yr	3.54E-06 tpy	8,760 hr/yr	4.40E-05 tpy	8,760 hr/yr	4.40E-05 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,028 hr/yr	1.02E-05 tpy	8,760 hr/yr	4.40E-05 tpy	8,760 hr/yr	4.40E-05 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,408 hr/yr	8.87E-06 tpy	8,760 hr/yr	5.52E-05 tpy	8,760 hr/yr	5.52E-05 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	5.52E-05 tpy	8,760 hr/yr	5.52E-05 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	3.29E-05 tpy	8,760 hr/yr	3.29E-05 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	3,105 hr/yr	1.54E-05 tpy	8,760 hr/yr	4.34E-05 tpy	8,760 hr/yr	4.34E-05 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,261 hr/yr	1.12E-05 tpy	8,760 hr/yr	4.34E-05 tpy	8,760 hr/yr	4.34E-05 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,908 hr/yr	2.58E-05 tpy	8,760 hr/yr	4.60E-05 tpy	8,760 hr/yr	4.60E-05 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,244 hr/yr	3.18E-05 tpy	8,760 hr/yr	6.57E-05 tpy	8,760 hr/yr	6.57E-05 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oil Boiler / Heater #1	Diesel	6 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	7.88E-05 tpy	55 days/yr	1.19E-05 tpy
24	Hot Oil Boiler / Heater #2	Diesel	9.5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	1.25E-04 tpy	55 days/yr	1.88E-05 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-32. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Chromium

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Chromium							0.0001 tpy		0.005 tpy		0.001 tpy

Notes:

¹ Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	NA	N A
Diesel-Fired Turbines	AP-42, Table 3.1-5	1.10E-05 lb/MMBtu
Flares	NA	N A
Diesel-Fired Engines, <600 hp	NA	N A
Diesel-Fired Engines, >600 hp	NA	N A
Diesel-Fired Heaters	AP-42, Table 1.3-10	3.00 lb/10 ¹² Btu
Gas-Fired Heaters	AP-42, Table 1.4-4	1.40E-03 lb/MMscf
Incinerators	AP-42, Table 2.1-2	8.97E-03 lb/ton

² Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-33. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TPV02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Cobalt

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	N A	NA	8,526 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	N A	NA	8,175 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	N A	NA	2,373 hr/yr	0 tpy	8,760 hr/yr	0 tpy ⁴	8,160 hr/yr	0 tpy
		Diesel	7.70 MW	N A	NA	19 hr/yr	0 tpy			600 hr/yr	0 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	N A	NA	6,864 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	N A	NA	41 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	N A	NA	27 MMscf/yr	0 tpy	365 days/yr	0 tpy	365 days/yr	0 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	N A	NA			365 days/yr	0 tpy	98 MMscf/yr	0 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	N A	NA	2,318 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	N A	NA	2,292 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	8.40E-05 lb/MMscf	AP-42, Table 1.4-4	0 hr/yr	0 tpy	8,760 hr/yr	3.42E-06 tpy	8,760 hr/yr	3.42E-06 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	N A	NA	46 hr/yr	0 tpy	8,760 hr/yr	0 tpy	500 hr/yr	0 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	N A	NA	49 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	N A	NA	29 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
50	Fire Water Pump	Diesel	183 bhp	N A	NA	30 hr/yr	0 tpy	8,760 hr/yr	0 tpy	100 hr/yr	0 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	N A	NA	4,091 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	N A	NA	1,199 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	N A	NA	1,199 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	N A	NA	267 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	N A	NA	892 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	N A	NA	137 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	N A	NA	704 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	N A	NA	2,028 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	N A	NA	1,408 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3,300 MMBtu/hr	N A	NA	3,105 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
99a	Rig Boiler #2	Diesel	3,300 MMBtu/hr	N A	NA	2,261 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	N A	NA	4,908 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	N A	NA	4,244 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oil Boiler / Heater #1	Diesel	6 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	55 days/yr	0 tpy
24	Hot Oil Boiler / Heater #2	Diesel	9.5 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	55 days/yr	0 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

**Table D-33. Eni US Operating Co. Inc. - Nikaitchuk Development
Renewal Application for Title V Operating Permit No. AQ0923TP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Cobalt**

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Cobalt							0 tpy		3.42E-06 tpy		3.42E-06 tpy

Notes:

¹ Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	NA	N A
Diesel-Fired Turbines	NA	N A
Flares	NA	N A
Diesel-Fired Engines, <600 hp	NA	N A
Diesel-Fired Engines, >600 hp	NA	N A
Diesel-Fired Heaters	NA	N A
Gas-Fired Heaters	AP-42, Table 1.4-4	8.40E-05 lb/MMscf
Incinerators	NA	N A

² Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-34. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Lead

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	N A	NA	8,526 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	N A	NA	8,175 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	N A	NA	2,373 hr/yr	0 tpy	8,760 hr/yr	0.005 tpy ⁴	8,160 hr/yr	0 tpy
		Diesel	7.70 MW	1.40E-05 lb/MMBtu	AP-42, Table 3.1-5	19 hr/yr	1.03E-05 tpy			600 hr/yr	0.0003 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	N A	NA	6,864 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	N A	NA	41 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	N A	NA	27 MMscf/yr	0 tpy	365 days/yr	0 tpy	365 days/yr	0 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	N A	NA			365 days/yr	0 tpy	98 MMscf/yr	0 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,318 hr/yr	9.75E-06 tpy	8,760 hr/yr	3.69E-05 tpy	8,760 hr/yr	3.69E-05 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,292 hr/yr	9.64E-06 tpy	8,760 hr/yr	3.69E-05 tpy	8,760 hr/yr	3.69E-05 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	N A	NA	0 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	N A	NA	46 hr/yr	0 tpy	8,760 hr/yr	0 tpy	500 hr/yr	0 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	N A	NA	49 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	N A	NA	29 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
50	Fire Water Pump	Diesel	183 bhp	N A	NA	30 hr/yr	0 tpy	8,760 hr/yr	0 tpy	100 hr/yr	0 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,091 hr/yr	4.47E-05 tpy	8,760 hr/yr	9.58E-05 tpy	8,760 hr/yr	9.58E-05 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	9.33E-06 tpy	8,760 hr/yr	6.82E-05 tpy	8,760 hr/yr	6.82E-05 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	9.33E-06 tpy	8,760 hr/yr	6.82E-05 tpy	8,760 hr/yr	6.82E-05 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	267 hr/yr	7.80E-07 tpy	8,760 hr/yr	2.56E-05 tpy	8,760 hr/yr	2.56E-05 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	892 hr/yr	2.61E-06 tpy	8,760 hr/yr	2.56E-05 tpy	8,760 hr/yr	2.56E-05 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	N A	NA	137 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	704 hr/yr	1.06E-05 tpy	8,760 hr/yr	0.0001 tpy	8,760 hr/yr	0.0001 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,028 hr/yr	3.06E-05 tpy	8,760 hr/yr	0.0001 tpy	8,760 hr/yr	0.0001 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,408 hr/yr	2.66E-05 tpy	8,760 hr/yr	0.0002 tpy	8,760 hr/yr	0.0002 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	0.0002 tpy	8,760 hr/yr	0.0002 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	9.86E-05 tpy	8,760 hr/yr	9.86E-05 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3,300 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	3,105 hr/yr	4.61E-05 tpy	8,760 hr/yr	0.0001 tpy	8,760 hr/yr	0.0001 tpy
99a	Rig Boiler #2	Diesel	3,300 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,261 hr/yr	3.36E-05 tpy	8,760 hr/yr	0.0001 tpy	8,760 hr/yr	0.0001 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,908 hr/yr	7.73E-05 tpy	8,760 hr/yr	0.0001 tpy	8,760 hr/yr	0.0001 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,244 hr/yr	9.55E-05 tpy	8,760 hr/yr	0.0002 tpy	8,760 hr/yr	0.0002 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	0.0002 tpy	55 days/yr	3.56E-05 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	9 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	0.0004 tpy	55 days/yr	5.64E-05 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-34. Eni US Operating Co. Inc. - Nikaitchuk Development
Renewal Application for Title V Operating Permit No. AQ0923TPV02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Lead

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Lead							0.0004 tpy		0.007 tpy		0.002 tpy

Notes:

¹ Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	NA	N A
Diesel-Fired Turbines	AP-42, Table 3.1-5	1.40E-05 lb/MMBtu
Flares	NA	N A
Diesel-Fired Engines, <600 hp	NA	N A
Diesel-Fired Engines, >600 hp	NA	N A
Diesel-Fired Heaters	AP-42, Table 1.3-10	9.0E+00 lb/10 ¹² Btu
Gas-Fired Heaters	NA	N A
Incinerators	AP-42, Table 2.1-2	2.13E-01 lb/ton

² Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-35. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TPV02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Manganese

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	N A	NA	8,526 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	N A	NA	8,175 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	N A	NA	2,373 hr/yr	0 tpy	8,760 hr/yr	0.3 tpy ⁴	8,160 hr/yr	0 tpy
		Diesel	7.70 MW	7.90E-04 lb/MMBtu	AP-42, Table 3.1-5	19 hr/yr	0.0006 tpy	8,760 hr/yr	0.3 tpy ⁴	600 hr/yr	0.02 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	N A	NA	6,864 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	N A	NA	41 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	N A	NA			365 days/yr	0 tpy	365 days/yr	0 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	N A	NA	27 MMscf/yr	0 tpy	365 days/yr	0 tpy	98 MMscf/yr	0 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,318 hr/yr	6.50E-06 tpy	8,760 hr/yr	2.46E-05 tpy	8,760 hr/yr	2.46E-05 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,292 hr/yr	6.43E-06 tpy	8,760 hr/yr	2.46E-05 tpy	8,760 hr/yr	2.46E-05 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	3.80E-04 lb/MMscf	AP-42, Table 1.4-4	0 hr/yr	0 tpy	8,760 hr/yr	1.55E-05 tpy	8,760 hr/yr	1.55E-05 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	N A	NA	46 hr/yr	0 tpy	8,760 hr/yr	0 tpy	500 hr/yr	0 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	N A	NA	49 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	N A	NA	29 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
50	Fire Water Pump	Diesel	183 bhp	N A	NA	30 hr/yr	0 tpy	8,760 hr/yr	0 tpy	100 hr/yr	0 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,091 hr/yr	2.98E-05 tpy	8,760 hr/yr	6.39E-05 tpy	8,760 hr/yr	6.39E-05 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	6.22E-06 tpy	8,760 hr/yr	4.55E-05 tpy	8,760 hr/yr	4.55E-05 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	6.22E-06 tpy	8,760 hr/yr	4.55E-05 tpy	8,760 hr/yr	4.55E-05 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	267 hr/yr	5.20E-07 tpy	8,760 hr/yr	1.71E-05 tpy	8,760 hr/yr	1.71E-05 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	892 hr/yr	1.74E-06 tpy	8,760 hr/yr	1.71E-05 tpy	8,760 hr/yr	1.71E-05 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	N A	NA	137 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	704 hr/yr	7.08E-06 tpy	8,760 hr/yr	0.0001 tpy	8,760 hr/yr	0.0001 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,028 hr/yr	2.04E-05 tpy	8,760 hr/yr	0.0001 tpy	8,760 hr/yr	0.0001 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,408 hr/yr	1.77E-05 tpy	8,760 hr/yr	0.0001 tpy	8,760 hr/yr	0.0001 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	0.0001 tpy	8,760 hr/yr	0.0001 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	6.57E-05 tpy	8,760 hr/yr	6.57E-05 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	3,105 hr/yr	3.07E-05 tpy	8,760 hr/yr	0.0001 tpy	8,760 hr/yr	0.0001 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,261 hr/yr	2.24E-05 tpy	8,760 hr/yr	0.0001 tpy	8,760 hr/yr	0.0001 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,908 hr/yr	5.15E-05 tpy	8,760 hr/yr	9.20E-05 tpy	8,760 hr/yr	9.20E-05 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,244 hr/yr	6.37E-05 tpy	8,760 hr/yr	0.0001 tpy	8,760 hr/yr	0.0001 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	0.0002 tpy	55 days/yr	2.38E-05 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	6 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	0.0002 tpy	55 days/yr	3.76E-05 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-35. Eni US Operating Co. Inc. - Nikaitchuk Development
Renewal Application for Title V Operating Permit No. AQ0923TP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Manganese

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Manganese							0.0009 tpy		0.3 tpy		0.02 tpy

Notes:

¹ Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	NA	N A
Diesel-Fired Turbines	AP-42, Table 3.1-5	7.90E-04 lb/MMBtu
Flares	NA	N A
Diesel-Fired Engines, <600 hp	NA	N A
Diesel-Fired Engines, >600 hp	NA	N A
Diesel-Fired Heaters	AP-42, Table 1.3-10	6.00E+00 lb/10 ¹² Btu
Gas-Fired Heaters	AP-42, Table 1.4-4	3.80E-04 lb/MMscf
Incinerators	NA	N A

² Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-36. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Mercury

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	N A	NA	8,526 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	N A	NA	8,175 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	N A	NA	2,373 hr/yr	0 tpy	8,760 hr/yr	0.0004 tpy ⁴	8,160 hr/yr	0 tpy
33		Diesel	7.70 MW	1.20E-06 lb/MMBtu	AP-42, Table 3.1-5	19 hr/yr	8.87E-07 tpy	8,760 hr/yr	0.0004 tpy	600 hr/yr	2.80E-05 tpy
	Gas Turbine #4	Fuel Gas	8.25 MW	N A	NA	6,864 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	N A	NA	41 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	N A	NA	27 MMscf/yr	0 tpy	365 days/yr	0 tpy	365 days/yr	0 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	N A	NA	---	---	365 days/yr	0 tpy	98 MMscf/yr	0 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,318 hr/yr	3.25E-06 tpy	8,760 hr/yr	1.23E-05 tpy	8,760 hr/yr	1.23E-05 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,292 hr/yr	3.21E-06 tpy	8,760 hr/yr	1.23E-05 tpy	8,760 hr/yr	1.23E-05 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	2.60E-04 lb/MMscf	AP-42, Table 1.4-4	0 hr/yr	0 tpy	8,760 hr/yr	1.06E-05 tpy	8,760 hr/yr	1.06E-05 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	N A	NA	46 hr/yr	0 tpy	8,760 hr/yr	0 tpy	500 hr/yr	0 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	N A	NA	49 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	N A	NA	29 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
50	Fire Water Pump	Diesel	183 bhp	N A	NA	30 hr/yr	0 tpy	8,760 hr/yr	0 tpy	100 hr/yr	0 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,091 hr/yr	1.49E-05 tpy	8,760 hr/yr	3.19E-05 tpy	8,760 hr/yr	3.19E-05 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	3.11E-06 tpy	8,760 hr/yr	2.27E-05 tpy	8,760 hr/yr	2.27E-05 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	3.11E-06 tpy	8,760 hr/yr	2.27E-05 tpy	8,760 hr/yr	2.27E-05 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	267 hr/yr	2.60E-07 tpy	8,760 hr/yr	8.53E-06 tpy	8,760 hr/yr	8.53E-06 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	892 hr/yr	8.68E-07 tpy	8,760 hr/yr	8.53E-06 tpy	8,760 hr/yr	8.53E-06 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	N A	NA	137 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	704 hr/yr	3.54E-06 tpy	8,760 hr/yr	4.40E-05 tpy	8,760 hr/yr	4.40E-05 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,028 hr/yr	1.02E-05 tpy	8,760 hr/yr	4.40E-05 tpy	8,760 hr/yr	4.40E-05 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,408 hr/yr	8.87E-06 tpy	8,760 hr/yr	5.52E-05 tpy	8,760 hr/yr	5.52E-05 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	5.52E-05 tpy	8,760 hr/yr	5.52E-05 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	3.29E-05 tpy	8,760 hr/yr	3.29E-05 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3,300 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	3,105 hr/yr	1.54E-05 tpy	8,760 hr/yr	4.34E-05 tpy	8,760 hr/yr	4.34E-05 tpy
99a	Rig Boiler #2	Diesel	3,300 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,261 hr/yr	1.12E-05 tpy	8,760 hr/yr	4.34E-05 tpy	8,760 hr/yr	4.34E-05 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,908 hr/yr	2.58E-05 tpy	8,760 hr/yr	4.60E-05 tpy	8,760 hr/yr	4.60E-05 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,244 hr/yr	3.18E-05 tpy	8,760 hr/yr	6.57E-05 tpy	8,760 hr/yr	6.57E-05 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	7.88E-05 tpy	55 days/yr	1.19E-05 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	0.0001 tpy	55 days/yr	1.88E-05 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-36. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Mercury

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Mercury							0.0001 tpy		0.001 tpy		0.001 tpy

Notes:

¹ Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	NA	N A
Diesel-Fired Turbines	AP-42, Table 3.1-5	1.20E-06 lb/MMBtu
Flares	NA	N A
Diesel-Fired Engines, <600 hp	NA	N A
Diesel-Fired Engines, >600 hp	NA	N A
Diesel-Fired Heaters	AP-42, Table 1.3-10	3.0E+00 lb/10 ¹² Btu
Gas-Fired Heaters	AP-42, Table 1.4-4	2.60E-04 lb/MMscf
Incinerators	AP-42, Table 2.1-2	5.60E-03 lb/ton

² Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-37. Eni US Operating Co. Inc. - Nikaitchuk Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Nickel

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	N A	NA	8,526 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	N A	NA	8,175 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	N A	NA	2,373 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,160 hr/yr	0 tpy
33		Diesel	7.70 MW	4.60E-06 lb/MMBtu	AP-42, Table 3.1-5	19 hr/yr	3.40E-06 tpy	8,760 hr/yr	0.002 tpy ⁴	600 hr/yr	0.0001 tpy
	Gas Turbine #4	Fuel Gas	8.25 MW	N A	NA	6,864 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	N A	NA	41 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMBtu/day	N A	NA	27 MMBtu/yr	0 tpy	365 days/yr	0 tpy	365 days/yr	0 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMBtu/day	N A	NA			365 days/yr	0 tpy	98 MMBtu/yr	0 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,318 hr/yr	3.25E-06 tpy	8,760 hr/yr	1.23E-05 tpy	8,760 hr/yr	1.23E-05 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,292 hr/yr	3.21E-06 tpy	8,760 hr/yr	1.23E-05 tpy	8,760 hr/yr	1.23E-05 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	2.10E-03 lb/MMscf	AP-42, Table 1.4-4	0 hr/yr	0 tpy	8,760 hr/yr	8.56E-05 tpy	8,760 hr/yr	8.56E-05 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	N A	NA	46 hr/yr	0 tpy	8,760 hr/yr	0 tpy	500 hr/yr	0 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	N A	NA	49 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	N A	NA	29 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
50	Fire Water Pump	Diesel	183 bhp	N A	NA	30 hr/yr	0 tpy	8,760 hr/yr	0 tpy	100 hr/yr	0 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,091 hr/yr	1.49E-05 tpy	8,760 hr/yr	3.19E-05 tpy	8,760 hr/yr	3.19E-05 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	3.11E-06 tpy	8,760 hr/yr	2.27E-05 tpy	8,760 hr/yr	2.27E-05 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	3.11E-06 tpy	8,760 hr/yr	2.27E-05 tpy	8,760 hr/yr	2.27E-05 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	267 hr/yr	2.60E-07 tpy	8,760 hr/yr	8.53E-06 tpy	8,760 hr/yr	8.53E-06 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	892 hr/yr	8.68E-07 tpy	8,760 hr/yr	8.53E-06 tpy	8,760 hr/yr	8.53E-06 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	N A	NA	137 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMBtu/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	704 hr/yr	3.54E-06 tpy	8,760 hr/yr	4.40E-05 tpy	8,760 hr/yr	4.40E-05 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,028 hr/yr	1.02E-05 tpy	8,760 hr/yr	4.40E-05 tpy	8,760 hr/yr	4.40E-05 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,408 hr/yr	8.87E-06 tpy	8,760 hr/yr	5.52E-05 tpy	8,760 hr/yr	5.52E-05 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	5.52E-05 tpy	8,760 hr/yr	5.52E-05 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	3.29E-05 tpy	8,760 hr/yr	3.29E-05 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	3,105 hr/yr	1.54E-05 tpy	8,760 hr/yr	4.34E-05 tpy	8,760 hr/yr	4.34E-05 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,261 hr/yr	1.12E-05 tpy	8,760 hr/yr	4.34E-05 tpy	8,760 hr/yr	4.34E-05 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,908 hr/yr	2.58E-05 tpy	8,760 hr/yr	4.60E-05 tpy	8,760 hr/yr	4.60E-05 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,244 hr/yr	3.18E-05 tpy	8,760 hr/yr	6.57E-05 tpy	8,760 hr/yr	6.57E-05 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	7.88E-05 tpy	55 days/yr	1.19E-05 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	3 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	0.0001 tpy	55 days/yr	1.88E-05 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-37. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Nickel

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Nickel							0.0001 tpy		0.002 tpy		0.001 tpy

Notes:

¹ Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	NA	N A
Diesel-Fired Turbines	AP-42, Table 3.1-5	4.60E-06 lb/MMBtu
Flares	NA	N A
Diesel-Fired Engines, <600 hp	NA	N A
Diesel-Fired Engines, >600 hp	NA	N A
Diesel-Fired Heaters	AP-42, Table 1.3-10	3.00E+00 lb/10 ¹² Btu
Gas-Fired Heaters	AP-42, Table 1.4-4	2.10E-03 lb/MMscf
Incinerators	AP-42, Table 2.1-2	7.85E-03 lb/ton

² Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-38. Eni US Operating Co. Inc. - Nikaitchuk Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Selenium

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	N A	NA	8,526 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	N A	NA	8,175 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	N A	NA	2,373 hr/yr	0 tpy	8,760 hr/yr	0.009 tpy ⁴	8,160 hr/yr	0 tpy
		Diesel	7.70 MW	2.50E-05 lb/MMBtu	AP-42, Table 3.1-5	19 hr/yr	1.85E-05 tpy	8,760 hr/yr	0 tpy	600 hr/yr	0.0006 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	N A	NA	6,864 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	N A	NA	41 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	N A	NA	27 MMscf/yr	0 tpy	365 days/yr	0 tpy	365 days/yr	0 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	N A	NA			365 days/yr	0 tpy	98 MMscf/yr	0 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,318 hr/yr	1.63E-05 tpy	8,760 hr/yr	6.14E-05 tpy	8,760 hr/yr	6.14E-05 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,292 hr/yr	1.61E-05 tpy	8,760 hr/yr	6.14E-05 tpy	8,760 hr/yr	6.14E-05 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	2.40E-05 lb/MMscf	AP-42, Table 1.4-4	0 hr/yr	0 tpy	8,760 hr/yr	9.79E-07 tpy	8,760 hr/yr	9.79E-07 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	N A	NA	46 hr/yr	0 tpy	8,760 hr/yr	0 tpy	500 hr/yr	0 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	N A	NA	49 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	N A	NA	29 hr/yr	0 tpy	8,760 hr/yr	0 tpy	2,000 hr/yr	0 tpy
50	Fire Water Pump	Diesel	183 bhp	N A	NA	30 hr/yr	0 tpy	8,760 hr/yr	0 tpy	100 hr/yr	0 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,091 hr/yr	7.46E-05 tpy	8,760 hr/yr	0.0002 tpy	8,760 hr/yr	0.0002 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	1.56E-05 tpy	8,760 hr/yr	0.0001 tpy	8,760 hr/yr	0.0001 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,199 hr/yr	1.56E-05 tpy	8,760 hr/yr	0.0001 tpy	8,760 hr/yr	0.0001 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	267 hr/yr	1.30E-06 tpy	8,760 hr/yr	4.26E-05 tpy	8,760 hr/yr	4.26E-05 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	892 hr/yr	4.34E-06 tpy	8,760 hr/yr	4.26E-05 tpy	8,760 hr/yr	4.26E-05 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	N A	NA	137 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	N A	NA	11 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	704 hr/yr	1.77E-05 tpy	8,760 hr/yr	0.0002 tpy	8,760 hr/yr	0.0002 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,028 hr/yr	5.10E-05 tpy	8,760 hr/yr	0.0002 tpy	8,760 hr/yr	0.0002 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	1,408 hr/yr	4.44E-05 tpy	8,760 hr/yr	0.0003 tpy	8,760 hr/yr	0.0003 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	0.0003 tpy	8,760 hr/yr	0.0003 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	0.0002 tpy	8,760 hr/yr	0.0002 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	3,105 hr/yr	7.68E-05 tpy	8,760 hr/yr	0.0002 tpy	8,760 hr/yr	0.0002 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	2,261 hr/yr	5.60E-05 tpy	8,760 hr/yr	0.0002 tpy	8,760 hr/yr	0.0002 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,908 hr/yr	0.0001 tpy	8,760 hr/yr	0.0002 tpy	8,760 hr/yr	0.0002 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	4,244 hr/yr	0.0002 tpy	8,760 hr/yr	0.0003 tpy	8,760 hr/yr	0.0003 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	0.0004 tpy	55 days/yr	5.94E-05 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	15 lb/10 ¹² Btu	AP-42, Table 1.3-10	0 hr/yr	0 tpy	8,760 hr/yr	0.0006 tpy	55 days/yr	9.41E-05 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

Table D-38. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Selenium

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Selenium							0.0007 tpy		0.01 tpy		0.003 tpy

Notes:

¹ Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	NA	N A
Diesel-Fired Turbines	AP-42, Table 3.1-5	2.50E-05 lb/MMBtu
Flares	NA	N A
Diesel-Fired Engines, <600 hp	NA	N A
Diesel-Fired Engines, >600 hp	NA	N A
Diesel-Fired Heaters	AP-42, Table 1.3-10	1.50E+01 lb/10 ¹² Btu
Gas-Fired Heaters	AP-42, Table 1.4-4	2.40E-05 lb/MMscf
Incinerators	NA	N A

² Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

**Table D-39. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Polycyclic Organic Matter ¹**

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	2.20E-06 lb/MMBtu	AP-42, Table 3.1-3	8,526 hr/yr	0.0008 tpy	8,760 hr/yr	0.0008 tpy	8,760 hr/yr	0.0008 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	2.20E-06 lb/MMBtu	AP-42, Table 3.1-3	8,175 hr/yr	0.0007 tpy	8,760 hr/yr	0.0008 tpy	8,760 hr/yr	0.0008 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	2.20E-06 lb/MMBtu	AP-42, Table 3.1-3	2,373 hr/yr	0.0002 tpy	8,760 hr/yr	0.0002 tpy	8,760 hr/yr	0.0007 tpy
		Diesel	7.70 MW	4.00E-05 lb/MMBtu	AP-42, Table 3.1-4	19 hr/yr	2.96E-05 tpy	8,760 hr/yr	0.01 tpy ⁵	600 hr/yr	0.0009 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	2.20E-06 lb/MMBtu	AP-42, Table 3.1-3	6,864 hr/yr	0.0006 tpy	8,760 hr/yr	0.0008 tpy	8,760 hr/yr	0.0008 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	2.12E-04 lb/MMBtu	AP-42, Table 3.4-4	41 hr/yr	0.0001 tpy	8,760 hr/yr	0.02 tpy	2,000 hr/yr	0.005 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	1.40E-02 lb/MMscf	VCAPCD	27 MMscf/yr	0.0002 tpy	365 days/yr	0.0009 tpy	365 days/yr	0.0009 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	1.40E-02 lb/MMscf	VCAPCD			365 days/yr	0.02 tpy	98 MMscf/yr	0.0007 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	2,318 hr/yr	2.98E-05 tpy	8,760 hr/yr	0.0001 tpy	8,760 hr/yr	0.0001 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	2,292 hr/yr	2.95E-05 tpy	8,760 hr/yr	0.0001 tpy	8,760 hr/yr	0.0001 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	7.69E-02 lb/MMscf	AP-42, Table 1.4-3	0 hr/yr	0 tpy	8,760 hr/yr	0.003 tpy	8,760 hr/yr	0.003 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	2.12E-04 lb/MMBtu	AP-42, Table 3.4-4	46 hr/yr	5.10E-05 tpy	8,760 hr/yr	0.01 tpy	500 hr/yr	0.0006 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	N A	NA	74 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	N A	NA	70 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	N A	NA	4,380 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	2.12E-04 lb/MMBtu	AP-42, Table 3.4-4	49 hr/yr	0.0001 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	2.12E-04 lb/MMBtu	AP-42, Table 3.4-4	29 hr/yr	7.82E-05 tpy	8,760 hr/yr	0.02 tpy	2,000 hr/yr	0.005 tpy
50	Fire Water Pump	Diesel	183 bhp	1.68E-04 lb/MMBtu	AP-42, Table 3.3-2	30 hr/yr	3.23E-06 tpy	8,760 hr/yr	0.0009 tpy	100 hr/yr	1.08E-05 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	4,091 hr/yr	0.0001 tpy	8,760 hr/yr	0.0003 tpy	8,760 hr/yr	0.0003 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	1,199 hr/yr	2.85E-05 tpy	8,760 hr/yr	0.0002 tpy	8,760 hr/yr	0.0002 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	1,199 hr/yr	2.85E-05 tpy	8,760 hr/yr	0.0002 tpy	8,760 hr/yr	0.0002 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	267 hr/yr	2.38E-06 tpy	8,760 hr/yr	7.82E-05 tpy	8,760 hr/yr	7.82E-05 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	892 hr/yr	7.96E-06 tpy	8,760 hr/yr	7.82E-05 tpy	8,760 hr/yr	7.82E-05 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	1.68E-04 lb/MMBtu	AP-42, Table 3.3-2	137 hr/yr	3.40E-05 tpy	8,760 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	1.68E-04 lb/MMBtu	AP-42, Table 3.3-2	11 hr/yr	2.07E-06 tpy	8,760 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	1.68E-04 lb/MMBtu	AP-42, Table 3.3-2	11 hr/yr	2.07E-06 tpy	8,760 hr/yr	0.002 tpy	8,760 hr/yr	0.002 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	704 hr/yr	3.24E-05 tpy	8,760 hr/yr	0.0004 tpy	8,760 hr/yr	0.0004 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	2,028 hr/yr	0.0001 tpy	8,760 hr/yr	0.0004 tpy	8,760 hr/yr	0.0004 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	1,408 hr/yr	8.13E-05 tpy	8,760 hr/yr	0.0005 tpy	8,760 hr/yr	0.0005 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	0 hr/yr	0 tpy	8,760 hr/yr	0.0005 tpy	8,760 hr/yr	0.0005 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	0 hr/yr	0 tpy	8,760 hr/yr	0.0003 tpy	8,760 hr/yr	0.0003 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3.300 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	3,105 hr/yr	0.0001 tpy	8,760 hr/yr	0.0004 tpy	8,760 hr/yr	0.0004 tpy
99a	Rig Boiler #2	Diesel	3.300 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	2,261 hr/yr	0.0001 tpy	8,760 hr/yr	0.0004 tpy	8,760 hr/yr	0.0004 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	4,908 hr/yr	0.0002 tpy	8,760 hr/yr	0.0004 tpy	8,760 hr/yr	0.0004 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	4,244 hr/yr	0.0003 tpy	8,760 hr/yr	0.0006 tpy	8,760 hr/yr	0.0006 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Maritowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	0 hr/yr	0 tpy	8,760 hr/yr	0.0007 tpy	55 days/yr	0.0001 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	3.30E-03 lb/kgal	AP-42, Table 1.3-8	0 hr/yr	0 tpy	8,760 hr/yr	1.14E-03 tpy	55 days/yr	0.0002 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

**Table D-39. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Hazardous Air Pollutants: Polycyclic Organic Matter ¹**

Emission Unit				Emission Factor ²		Expected Actual Annual Emissions (After Controls/Limitations) ³		Potential Annual Emissions (Before Controls/Limitations) ³		Potential Annual Emissions (After Controls/Limitations) ³	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ⁴		Operation/ Consumption		Operation/ Consumption	
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Polycyclic Organic Matter							0.004 tpy		0.1 tpy		0.05 tpy

Notes:

¹ Not excluded from the definition of volatile organic compounds under 40 CFR 50.100(s).

² Emission factors:

Source Type	Reference	Emission Factor
Gas-Fired Turbines	AP-42, Table 3.1-3	2.20E-06 lb/MMBtu
Diesel-Fired Turbines	AP-42, Table 3.1-4	4.00E-05 lb/MMBtu
Flares	VCAPCD	1.40E-02 lb/MMscf
Diesel-Fired Engines, <600 hp	AP-42, Table 3.3-2	1.68E-04 lb/MMBtu
Diesel-Fired Engines, >600 hp	AP-42, Table 3.4-4	2.12E-04 lb/MMBtu
Diesel-Fired Heaters	AP-42, Table 1.3-8	3.30E-03 lb/kgal
Gas-Fired Heaters	AP-42, Table 1.4-3	7.69E-02 lb/MMscf
Incinerators	NA	N A

VCAPCD: Ventura County Air Pollution Control District, AB 2588

³ Conversion parameters, fuel characteristics, and equipment assumptions:

Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf

⁴ Based on actual annual use data from calendar year 2023.

⁵ Worst case emissions estimated for fuel gas or diesel use.

Table D-40. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Carbon Dioxide

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/Consumption ³		Operation/Consumption		Operation/Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	59.00 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	8,526 hr/yr	46,204 tpy	8,760 hr/yr	47,472 tpy	8,760 hr/yr	47,472 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	59.00 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	8,175 hr/yr	44,302 tpy	8,760 hr/yr	47,472 tpy	8,760 hr/yr	47,472 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	59.00 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	2,373 hr/yr	12,860 tpy	8,760 hr/yr	55,541 tpy ⁴	8,160 hr/yr	44,220 tpy
		Diesel	7.70 MW	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	19 hr/yr	120 tpy			600 hr/yr	3,804 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	59.00 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	6,864 hr/yr	37,197 tpy	8,760 hr/yr	47,472 tpy	8,760 hr/yr	47,472 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	41 hr/yr	78 tpy	8,760 hr/yr	16,760 tpy	2,000 hr/yr	3,826 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	59.00 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	27 MMscf/yr	1,981 tpy	365 days/yr	9,640 tpy	365 days/yr	9,640 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	59.00 kg CO ₂ /MMBtu	40 CFR 98, Table C-1			365 days/yr	198,148 tpy	98 MMscf/yr	7,153 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	2,318 hr/yr	221 tpy	8,760 hr/yr	835 tpy	8,760 hr/yr	835 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	2,292 hr/yr	218 tpy	8,760 hr/yr	835 tpy	8,760 hr/yr	835 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	59.00 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	0 hr/yr	0 tpy	8,760 hr/yr	7,478 tpy	8,760 hr/yr	7,478 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	46 hr/yr	39 tpy	8,760 hr/yr	7,474 tpy	500 hr/yr	427 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	61.46 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	74 hr/yr	13 tpy	8,760 hr/yr	1,484 tpy	8,760 hr/yr	1,484 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	61.46 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	70 hr/yr	12 tpy	8,760 hr/yr	1,484 tpy	8,760 hr/yr	1,484 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	61.46 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	4,380 hr/yr	347 tpy	8,760 hr/yr	694 tpy	8,760 hr/yr	694 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	61.46 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	4,380 hr/yr	347 tpy	8,760 hr/yr	694 tpy	8,760 hr/yr	694 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	49 hr/yr	94 tpy	8,760 hr/yr	16,752 tpy	8,760 hr/yr	16,752 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	29 hr/yr	60 tpy	8,760 hr/yr	18,172 tpy	2,000 hr/yr	4,149 tpy
50	Fire Water Pump	Diesel	183 bhp	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	30 hr/yr	3 tpy	8,760 hr/yr	915 tpy	100 hr/yr	10 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	4,091 hr/yr	1,013 tpy	8,760 hr/yr	2,169 tpy	8,760 hr/yr	2,169 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	1,199 hr/yr	211 tpy	8,760 hr/yr	1,544 tpy	8,760 hr/yr	1,544 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	1,199 hr/yr	211 tpy	8,760 hr/yr	1,544 tpy	8,760 hr/yr	1,544 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	267 hr/yr	18 tpy	8,760 hr/yr	579 tpy	8,760 hr/yr	579 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	892 hr/yr	59 tpy	8,760 hr/yr	579 tpy	8,760 hr/yr	579 tpy
84	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	137 hr/yr	33 tpy	8,760 hr/yr	2,110 tpy	8,760 hr/yr	2,110 tpy
88	Cement Pump Engine #1	Diesel	320 bhp	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	11 hr/yr	2 tpy	8,760 hr/yr	1,600 tpy	8,760 hr/yr	1,600 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	11 hr/yr	2 tpy	8,760 hr/yr	1,600 tpy	8,760 hr/yr	1,600 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	704 hr/yr	240 tpy	8,760 hr/yr	2,991 tpy	8,760 hr/yr	2,991 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	2,028 hr/yr	692 tpy	8,760 hr/yr	2,991 tpy	8,760 hr/yr	2,991 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	1,408 hr/yr	603 tpy	8,760 hr/yr	3,749 tpy	8,760 hr/yr	3,749 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	0 hr/yr	0 tpy	8,760 hr/yr	3,749 tpy	8,760 hr/yr	3,749 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	0 hr/yr	0 tpy	8,760 hr/yr	2,232 tpy	8,760 hr/yr	2,232 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3,300 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	3,105 hr/yr	1,044 tpy	8,760 hr/yr	2,946 tpy	8,760 hr/yr	2,946 tpy
99a	Rig Boiler #2	Diesel	3,300 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	2,261 hr/yr	760 tpy	8,760 hr/yr	2,946 tpy	8,760 hr/yr	2,946 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	4,908 hr/yr	1,751 tpy	8,760 hr/yr	3,125 tpy	8,760 hr/yr	3,125 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	4,244 hr/yr	2,162 tpy	8,760 hr/yr	4,464 tpy	8,760 hr/yr	4,464 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	0 hr/yr	0 tpy	8,760 hr/yr	5,356 tpy	55 days/yr	807 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	73.96 kg CO ₂ /MMBtu	40 CFR 98, Table C-1	0 hr/yr	0 tpy	8,760 hr/yr	8,481 tpy	55 days/yr	1,278 tpy
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy

**Table D-40. Eni US Operating Co. Inc. - Nikaitchuq Development
Renewal Application for Title V Operating Permit No. AQ0923TVP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Carbon Dioxide**

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Carbon Dioxide							152,898 tpy		534,074 tpy		288,901 tpy

Notes:

¹ Emission factors:

Fuel Type	Reference	Emission Factor
Fuel Gas	40 CFR 98, Table C-1	59.00 kg CO ₂ /MMBtu
Distillate Fuel Oil No. 2	40 CFR 98, Table C-1	73.96 kg CO ₂ /MMBtu
Petroleum Products-Gaseous, Propane	40 CFR 98, Table C-1	61.46 kg CO ₂ /MMBtu
Municipal Solid Waste	40 CFR 98, Table C-1	90.7 kg CO ₂ /MMBtu

² Conversion parameters, fuel characteristics, and equipment assumptions:

Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Propane fuel heat content:	90,500 Btu/gal
Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Default high heat value, municipal solid waste (40 CFR 98, Table C-1)	9.95 MMBtu/short ton

³ Based on actual annual use data from calendar year 2023.

⁴ Worst case emissions estimated for fuel gas or diesel use.

Table D-41. Eni US Operating Co. Inc. - Nikaichuq Development
Renewal Application for Title V Operating Permit No. AQ0923TPV02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Methane

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	8,526 hr/yr	2.3 tpy	8,760 hr/yr	2.4 tpy	8,760 hr/yr	2.4 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	8,175 hr/yr	2.3 tpy	8,760 hr/yr	2.4 tpy	8,760 hr/yr	2.4 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	2,373 hr/yr	0.7 tpy	8,760 hr/yr	2.4 tpy ⁴	8,160 hr/yr	2.2 tpy
		Diesel	7.70 MW	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	19 hr/yr	0.005 tpy			600 hr/yr	0.2 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	6,864 hr/yr	1.9 tpy	8,760 hr/yr	2.4 tpy	8,760 hr/yr	2.4 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	41 hr/yr	0.003 tpy	8,760 hr/yr	0.7 tpy	2,000 hr/yr	0.2 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscf/day	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	27 MMscf/yr	0.1 tpy	365 days/yr	0.5 tpy	365 days/yr	0.5 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscf/day	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2			365 days/yr	10.1 tpy	98 MMscf/yr	0.4 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	2,318 hr/yr	0.009 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	2,292 hr/yr	0.009 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	0 hr/yr	0 tpy	8,760 hr/yr	0.4 tpy	8,760 hr/yr	0.4 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	46 hr/yr	0.002 tpy	8,760 hr/yr	0.3 tpy	500 hr/yr	0.02 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	Table C-2, 40 CFR 98	74 hr/yr	0.0006 tpy	8,760 hr/yr	0.07 tpy	8,760 hr/yr	0.07 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	Table C-2, 40 CFR 98	70 hr/yr	0.0006 tpy	8,760 hr/yr	0.07 tpy	8,760 hr/yr	0.07 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	Table C-2, 40 CFR 98	4,380 hr/yr	0.02 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	Table C-2, 40 CFR 98	4,380 hr/yr	0.02 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	49 hr/yr	0.004 tpy	8,760 hr/yr	0.7 tpy	8,760 hr/yr	0.7 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	29 hr/yr	0.002 tpy	8,760 hr/yr	0.7 tpy	2,000 hr/yr	0.2 tpy
50	Fire Water Pump	Diesel	183 bhp	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	30 hr/yr	0.0001 tpy	8,760 hr/yr	0.04 tpy	100 hr/yr	0.0004 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	4,091 hr/yr	0.04 tpy	8,760 hr/yr	0.09 tpy	8,760 hr/yr	0.09 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	1,199 hr/yr	0.009 tpy	8,760 hr/yr	0.06 tpy	8,760 hr/yr	0.06 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	1,199 hr/yr	0.009 tpy	8,760 hr/yr	0.06 tpy	8,760 hr/yr	0.06 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	267 hr/yr	0.0007 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	892 hr/yr	0.002 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	137 hr/yr	0.001 tpy	8,760 hr/yr	0.09 tpy	8,760 hr/yr	0.09 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	11 hr/yr	8.15E-05 tpy	8,760 hr/yr	0.06 tpy	8,760 hr/yr	0.06 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	11 hr/yr	8.15E-05 tpy	8,760 hr/yr	0.06 tpy	8,760 hr/yr	0.06 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscf/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	704 hr/yr	0.01 tpy	8,760 hr/yr	0.1 tpy	8,760 hr/yr	0.1 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	2,028 hr/yr	0.03 tpy	8,760 hr/yr	0.1 tpy	8,760 hr/yr	0.1 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	1,408 hr/yr	0.02 tpy	8,760 hr/yr	0.2 tpy	8,760 hr/yr	0.2 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	0 hr/yr	0 tpy	8,760 hr/yr	0.2 tpy	8,760 hr/yr	0.2 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	0 hr/yr	0 tpy	8,760 hr/yr	0.09 tpy	8,760 hr/yr	0.09 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3,300 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	3,105 hr/yr	0.04 tpy	8,760 hr/yr	0.1 tpy	8,760 hr/yr	0.1 tpy
99a	Rig Boiler #2	Diesel	3,300 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	2,261 hr/yr	0.03 tpy	8,760 hr/yr	0.1 tpy	8,760 hr/yr	0.1 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	4,908 hr/yr	0.07 tpy	8,760 hr/yr	0.1 tpy	8,760 hr/yr	0.1 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	4,244 hr/yr	0.09 tpy	8,760 hr/yr	0.2 tpy	8,760 hr/yr	0.2 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oil Boiler / Heater #1	Diesel	6 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	0 hr/yr	0 tpy	8,760 hr/yr	0.2 tpy	55 days/yr	0.03 tpy
24	Hot Oil Boiler / Heater #2	Diesel	9.5 MMBtu/hr	3.00E-03 kg CH ₄ /MMBtu	40 CFR 98, Table C-2	0 hr/yr	0 tpy	8,760 hr/yr	0.3 tpy	55 days/yr	0.05 tpy

Table D-41. Eni US Operating Co. Inc. - Nikaichuq Development
Renewal Application for Title V Operating Permit No. AQ0923TP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Methane

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Methane							8 tpy		26 tpy		14 tpy

Notes:

¹ Emission factors:

Fuel Type	Reference	Emission Factor
Fuel Gas	40 CFR 98, Table C-2	3.00E-03 kg CH ₄ /MMBtu
Petroleum Products	40 CFR 98, Table C-2	3.00E-03 kg CH ₄ /MMBtu
Other Fuels - Solid	40 CFR 98, Table C-2	3.20E-02 kg CH ₄ /MMBtu

² Conversion parameters, fuel characteristics, and equipment assumptions:

Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Propane fuel heat content:	90,500 Btu/gal
Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Default high heat value, municipal solid waste (40 CFR 98, Table C-1)	9.95 MMBtu/short ton

³ Based on actual annual use data from calendar year 2023.

⁴ Worst case emissions estimated for fuel gas or diesel use.

Table D-42. Eni US Operating Co. Inc. - Nikaichuq Development
Renewal Application for Title V Operating Permit No. AQ0923TPV02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Nitrous Oxide

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
Significant Emission Units											
1	Gas Turbine #1	Fuel Gas	8.25 MW	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	8,526 hr/yr	0.5 tpy	8,760 hr/yr	0.5 tpy	8,760 hr/yr	0.5 tpy
2	Gas Turbine #2	Fuel Gas	8.25 MW	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	8,175 hr/yr	0.5 tpy	8,760 hr/yr	0.5 tpy	8,760 hr/yr	0.5 tpy
32	Dual Fuel Turbine #3	Fuel Gas	8.25 MW	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	2,373 hr/yr	0.1 tpy	8,760 hr/yr	0.5 tpy ⁴	8,160 hr/yr	0.4 tpy
		Diesel	7.70 MW	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	19 hr/yr	0.001 tpy			600 hr/yr	0.03 tpy
33	Gas Turbine #4	Fuel Gas	8.25 MW	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	6,864 hr/yr	0.4 tpy	8,760 hr/yr	0.5 tpy	8,760 hr/yr	0.5 tpy
3	OPP Standby Generator - Reciprocating Engine	Diesel	2.50 MW	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	41 hr/yr	0.0006 tpy	8,760 hr/yr	0.1 tpy	2,000 hr/yr	0.03 tpy
4	Daily Purge & Pilot Operation	Fuel Gas	0.36 MMscl/day	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	27 MMscl/yr	0.02 tpy	365 days/yr	0.1 tpy	365 days/yr	0.1 tpy
	Low Pressure Emergency Operation	Fuel Gas	7.4 MMscl/day	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2			365 days/yr	2.0 tpy	98 MMscl/yr	0.07 tpy
70	OPP WIF Boiler #2	Diesel	0.935 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	2,318 hr/yr	0.002 tpy	8,760 hr/yr	0.007 tpy	8,760 hr/yr	0.007 tpy
71	OPP WIF Boiler #3	Diesel	0.935 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	2,292 hr/yr	0.002 tpy	8,760 hr/yr	0.007 tpy	8,760 hr/yr	0.007 tpy
78	Construction Power Generator #1 (NRE)	Diesel	2,763 bhp	---	---	---	---	---	---	---	---
106	Standby Heater	Fuel Gas	10.5 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	0 hr/yr	0 tpy	8,760 hr/yr	0.08 tpy	8,760 hr/yr	0.08 tpy
93	NOC Standby Generator - Reciprocating Engine	Diesel	1,495 hp	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	46 hr/yr	0.0003 tpy	8,760 hr/yr	0.06 tpy	500 hr/yr	0.003 tpy
94	NOC Camp Boiler #1	Propane	2 MMBtu/hr	3.00E-03 kg N ₂ O/MMBtu	Table C-2, 40 CFR 98	74 hr/yr	0.0006 tpy	8,760 hr/yr	0.07 tpy	8,760 hr/yr	0.07 tpy
95	NOC Camp Boiler #2	Propane	2 MMBtu/hr	3.00E-03 kg N ₂ O/MMBtu	Table C-2, 40 CFR 98	70 hr/yr	0.0006 tpy	8,760 hr/yr	0.07 tpy	8,760 hr/yr	0.07 tpy
97	Construction Power Generator #2 (NRE)	Diesel	1,381 bhp	---	---	---	---	---	---	---	---
111	NOC Warm Storage Boiler #1	Propane	0.935 MMBtu/hr	3.00E-03 kg N ₂ O/MMBtu	Table C-2, 40 CFR 98	4,380 hr/yr	0.02 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
112	NOC Warm Storage Boiler #2	Propane	0.935 MMBtu/hr	3.00E-03 kg N ₂ O/MMBtu	Table C-2, 40 CFR 98	4,380 hr/yr	0.02 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
118	Gasoline Dispensing Facility Tank 110	Gasoline	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
47	SID Standby Generator E04 - Reciprocating Engine	Diesel	3,351 bhp	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	49 hr/yr	0.0008 tpy	8,760 hr/yr	0.1 tpy	8,760 hr/yr	0.1 tpy
49	SID Standby Generator E07 - Reciprocating Engine	Diesel	3,635 bhp	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	29 hr/yr	0.0005 tpy	8,760 hr/yr	0.1 tpy	2,000 hr/yr	0.03 tpy
50	Fire Water Pump	Diesel	183 bhp	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	30 hr/yr	2.54E-05 tpy	8,760 hr/yr	0.007 tpy	100 hr/yr	8.47E-05 tpy
108	Tent Heating Boiler #2	Diesel	2.43 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	4,091 hr/yr	0.008 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
109	SID WIF Boiler #1	Diesel	1.73 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	1,199 hr/yr	0.002 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
110	SID WIF Boiler #2	Diesel	1.73 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	1,199 hr/yr	0.002 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
114	Mud Tank Farm Boiler #1	Diesel	0.649 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	267 hr/yr	0.0001 tpy	8,760 hr/yr	0.005 tpy	8,760 hr/yr	0.005 tpy
115	Mud Tank Farm Boiler #2	Diesel	0.649 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	892 hr/yr	0.0005 tpy	8,760 hr/yr	0.005 tpy	8,760 hr/yr	0.005 tpy
64	SID WIF Generator Reciprocating Engine	Diesel	422 bhp	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	137 hr/yr	0.0003 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
68	Cement Pump Engine #1	Diesel	320 bhp	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	11 hr/yr	1.63E-05 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
116	Cement Pump Engine #2	Diesel	320 bhp	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	11 hr/yr	1.63E-05 tpy	8,760 hr/yr	0.01 tpy	8,760 hr/yr	0.01 tpy
123	Construction Well Test Flare	Fuel Gas	3 MMscl/day	---	---	---	---	---	---	---	---
9a	Rig Boiler #1	Diesel	3.4 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	704 hr/yr	0.002 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
10a	Rig Boiler #2	Diesel	3.4 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	2,028 hr/yr	0.006 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
11a	Air Heater	Diesel	4.2 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	1,408 hr/yr	0.005 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
12	Rig Heater #2	Diesel	4.2 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	0 hr/yr	0 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
13	Rig Heater #3	Diesel	2.5 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	0 hr/yr	0 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
14	Rig Engine #1 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
15	Rig Engine #2 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
16	Rig Engine #3 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
17	Rig Engine #4 (NRE)	Diesel	1,128 bhp	---	---	---	---	---	---	---	---
18	Coldstart Motors (NRE)	Diesel	233 bhp	---	---	---	---	---	---	---	---
74	Reciprocating Engine #1 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
75	Reciprocating Engine #2 (NRE)	Diesel	303 bhp	---	---	---	---	---	---	---	---
98a	Rig Boiler #1	Diesel	3,300 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	3,105 hr/yr	0.01 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
99a	Rig Boiler #2	Diesel	3,300 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	2,261 hr/yr	0.006 tpy	8,760 hr/yr	0.02 tpy	8,760 hr/yr	0.02 tpy
100	Rig Heater #1	Diesel	3.5 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	4,908 hr/yr	0.01 tpy	8,760 hr/yr	0.03 tpy	8,760 hr/yr	0.03 tpy
101	Rig Heater #2	Diesel	5 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	4,244 hr/yr	0.02 tpy	8,760 hr/yr	0.04 tpy	8,760 hr/yr	0.04 tpy
102	Reciprocating Engine #1 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
103	Reciprocating Engine #2 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
104	Reciprocating Engine #3 (NRE)	Diesel	2,523 bhp	---	---	---	---	---	---	---	---
105	Reciprocating Engine #4 (NRE)	Diesel	1,879 bhp	---	---	---	---	---	---	---	---
117	Mud Pump #3 Coldstart (NRE)	Diesel	63 bhp	---	---	---	---	---	---	---	---
124	Reciprocating Engine #5 (NRE)	Diesel	2,150 bhp	---	---	---	---	---	---	---	---
125	Reciprocating Engine #6 (NRE)	Diesel	2,722 bhp	---	---	---	---	---	---	---	---
19	Peak Crane (NRE)	Diesel	650 bhp	---	---	---	---	---	---	---	---
20	Manitowoc Crane (NRE)	Diesel	575 bhp	---	---	---	---	---	---	---	---
23	Hot Oilier Boiler / Heater #1	Diesel	6 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	0 hr/yr	0 tpy	8,760 hr/yr	0.04 tpy	55 days/yr	0.007 tpy
24	Hot Oilier Boiler / Heater #2	Diesel	9.5 MMBtu/hr	6.00E-04 kg N ₂ O/MMBtu	40 CFR 98, Table C-2	0 hr/yr	0 tpy	8,760 hr/yr	0.07 tpy	55 days/yr	0.01 tpy

**Table D-42. Eni US Operating Co. Inc. - Nikaichuq Development
Renewal Application for Title V Operating Permit No. AQ09237VP02
Stationary Source Emissions Summary - Base Scenario
Emissions Summary - Nitrous Oxide**

Emission Unit				Emission Factor ¹		Expected Actual Annual Emissions (After Controls/Limitations) ²		Potential Annual Emissions (Before Controls/Limitations) ²		Potential Annual Emissions (After Controls/Limitations) ²	
ID	Description	Fuel	Rating/Size	Rate	Reference	Operation/ Consumption ³		Operation/ Consumption		Operation/ Consumption	
Insignificant Emission Units											
NA	Condensate Tank S	Condensate	1,176 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Bulk Rectangular Diesel Tank	Diesel	3,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Boiler Diesel Fuel Tank	Diesel	150 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Diesel Emergency Generator Engine Tank	Diesel	5,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	NOC Helicopter Hanger Jet-A Tank	Jet-A	2,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	WIF Storage Tank	Diesel	3,570 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Motor Room, Diesel Day Tank	Diesel	3,245 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	1,818 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,873 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
NA	Pipe Shed Diesel Tank	Diesel	9,957 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
5	Slop Oil Tank A	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
6	Slop Oil Tank B	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
34	Slop Oil Tank C	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
35	Slop Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
36	Slop Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
37	Slop Oil Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
38	Slop Oil Tank G	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
39	Slop Oil Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
40	Slop Oil Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
41	Slop Oil Tank J	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
7	Diesel Tank O	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
8	Base Oil Tank K	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
42	Diesel Tank P	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
43	Corrosion Inhibitor Storage Tank R	NA	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
44	Antifoam Storage Tank N	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
45	Scale Inhibitor Storage Tank L	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
46	Emulsion Breaker Storage Tank M	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
51	Diesel Tank A	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
52	Diesel Tank B	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
53	Diesel Tank C	Diesel	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
54	Base Oil Tank D	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
55	Base Oil Tank E	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
56	Corrosion Inhibitor Tank F	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
57	Scale Inhibitor Tank G	NA	400 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
58	Friction Reducer Tank H	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
59	Future Chemical Tank I	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
60	Contaminated Base Oil/Diesel Tank J	NA	200 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
61	Biocide Tank K	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
62	Future Chemical Tank L	NA	750 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
63	Disposal Fluids Tank U	NA	1,000 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
119	Diesel Tank Q	Diesel	600 bbls	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
120	Diesel Dispensing Facility Tank 110	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
121	Diesel Dispensing Facility Tank 120	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
122	Diesel Dispensing Facility Tank 130	Diesel	12,000 gallons	N A	NA	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy	8,760 hr/yr	0 tpy
Total Annual Emissions - Nitrous Oxide							2 tpy		5 tpy		3 tpy

Notes:

¹ Emission factors:

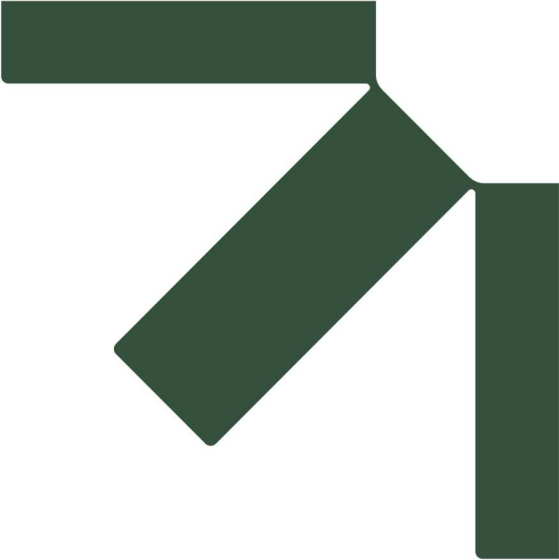
Fuel Type	Reference	Emission Factor
Fuel Gas	40 CFR 98, Table C-2	6.00E-04 kg N ₂ O/MMBtu
Petroleum Products	40 CFR 98, Table C-2	6.00E-04 kg N ₂ O/MMBtu
Other Fuels - Solid	40 CFR 98, Table C-2	4.20E-03 kg N ₂ O/MMBtu

² Conversion parameters, fuel characteristics, and equipment assumptions:

Fuel gas heat content (2023 gas analysis):	1,128 Btu/scf
Diesel fuel heat content (Arctic Diesel):	120,000 Btu/gal
Propane fuel heat content:	90,500 Btu/gal
Efficiency of heaters:	80%
Solar turbine heat rate:	10,100 Btu/kW-hr
BSFC from AP-42, October 1996, Section 3.4, Page 3.4-5:	7,000 Btu/hp-hr
Default high heat value, municipal solid waste (40 CFR 98, Table C-1)	9.95 MMBtu/short ton

³ Based on actual annual use data from calendar year 2023.

⁴ Worst case emissions estimated for fuel gas or diesel use.



Appendix E Regulatory Requirements

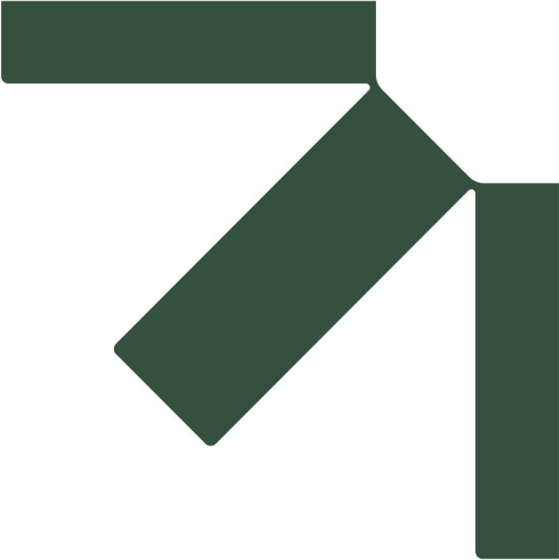
Application for Renewal of an Air Quality Title V Operating Permit

Nikaitchuq Development

Eni US Operating Co. Inc.

July 22, 2024



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- E.1 Form E1: Stationary Source-Wide Applicable Requirements**
 - E.2 Form E3: Title V Condition Change Request**
 - E.3 Form E4: Permit Shield Request**
 - E.4 Form E5: Alternative Monitoring Procedures (AMP) From**
 - E.5 Attachment: 2012 EPA Test Waivers**

FORM E1
Stationary Source-Wide Applicable Requirements

Permit Number: AQ0923TVP02

Stationary Source-Wide Applicable Requirements (attach additional sheets as needed):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter / Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0923TVP02 – Condition 16.1	18 AAC 50.050(a) and 50.055(a)(1)	Insignificant Emissions Units VE Standard	Do not cause or allow visible emissions, excluding condensed water vapor, to reduce visibility through the exhaust fluent by more than 20 percent averaged over any six consecutive minutes from an industrial process, fuel-burning equipment, or an incinerator.	Yes	Monitoring, recordkeeping, and reporting (MR&R) in accordance with Conditions 16.4a through 16.4d.
AQ0923TVP02 – Condition 16.2	18 AAC 50.055(b)(1)	Insignificant Emissions Units PM Standard	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours from an industrial process or fuel-burning equipment.	Yes	MR&R in accordance with Conditions 16.4a through 16.4d.
AQ0923TVP02 – Condition 16.3	18 AAC 50.055(c)	Insignificant Emissions Units Sulfur Standard	Do not cause or allow sulfur compound emissions to exceed 500 ppm averaged over three hours from an industrial process or fuel-burning equipment.	Yes	MR&R in accordance with Conditions 16.4a through 16.4d.
AQ0923TVP02 – Condition s 23.1 24	18 AAC 50.040(j) & 50.326(j); 40 CFR 71.6(a); Conditions 15.1 & 16, Minor Permit AQ0923MSS11	General AAQS Provisions - Air Quality Boundary and Public Access Control Plan	Establish and maintain the ambient boundaries using the procedures described in Condition 24.	Yes	MR&R in accordance with the provisions of Condition 24.

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter / Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0923TVP02 – Condition s 23.4 and 25	, 18 AAC 50.040(j) and 50.326(j); 40 CFR 71.6(a); Conditions 15.3 & 17, Minor Permit AQ0923MSS11	General AAQS Provisions – On-site housing and Eni Eni Working Times and Hours Policy	If providing on-site housing, follow the procedures described in Condition 25.	Yes	MR&R in accordance with the provisions of Condition 25.
AQ0923TVP02 – Condition 30	18 AAC 50.035 & 50.040(a)(1); 40 CFR 60.7(a) & 60.15(d)	NSPS Subpart A Notification	Unless exempted by a specific subpart, for any affected facility or existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Administrator written notification or, if acceptable to both the EPA and the Permittee, electronic notification, as outlined in Conditions 30.1 through 30.4.	Yes	Reporting in accordance with the provisions of Conditions 30.1 through 30.4.
AQ0923TVP02 – Condition 34	18 AAC 50.040(a)(1); 40 CFR 60.8(a)	NSPS Subpart A Performance (Source) Tests	Conduct source tests according to 40 CFR 60.8 and Section 7 at such times as may be required by the Administrator and provide the Department and EPA with a written report of the results of the source test.	Yes	MR&R in accordance with this condition.
AQ0923TVP02 – Condition 63	18 AAC 50.040(b)(1) & (2)(F), & 50.326(j); 40 CFR 61, Subparts A & M, and Appendix A	NESHAP Subpart A – General Provisions and NESHAP Subpart M – Asbestos	Comply with the requirements set forth in 40 CFR 61.145, 61.150, and 61.152 of Subpart M, and the applicable sections set forth in 40 CFR 61, Subpart A and Appendix A.	Yes	MR&R in accordance with this condition.
AQ0923TVP02 – Condition 64	18 AAC 50.040(d) & 50.326(j); 40 CFR 82, Subpart F	Subpart F – Recycling and Emissions Reduction	Comply with the applicable standards for recycling and emission reduction of refrigerants in 40 CFR 82 Subpart F.	Yes	MR&R in accordance with this condition.

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter / Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0923TVP02 – Condition 65	18 AAC 50.040(d) & 50.326(j); 40 CFR 82.174(b) – (d), Subpart G	Subpart G – Significant New Alternatives	Comply with the applicable prohibitions in 40 CFR 82.174.	Yes	MR&R in accordance with this condition.
AQ0923TVP02 – Condition 66	18 AAC 50.040(d) & 50.326(j); 40 CFR 82.270(b) – (f), Subpart H	Subpart H – Halons Emissions Reduction	Comply with the applicable prohibitions in 40 CFR 82.270.	Yes	MR&R in accordance with this condition.
AQ0923TVP02 – Condition 67	18 AAC 50.040(c)(1), 50.040(j), & 50.326(j); 40 CFR 71.6(a)(3)(ii), 63.1(b), 63.5(b)(4), 63.6(c)(1), 63.9(b), & 63.10(b)(3)	NESHAP Applicability Determinations	Determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 CFR 63) in accordance with the procedures described in 40 CFR 63.1(b).	Yes	MR&R in accordance with this condition.
AQ0923TVP02 – Condition 68	18 AAC 50.326(j)(3), 50.345(a) & (e)	Standard Terms and Conditions	Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.	Yes	N/A – Advisory Provision
AQ0923TVP02 – Condition 69	18 AAC 50.326(j)(3), 50.345(a) & (f)	Standard Terms and Conditions	The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and re-issuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.	Yes	N/A – Advisory Provision
AQ0923TVP02 – Condition 70	18 AAC 50.326(j)(3), 50.345(a) & (g)	Standard Terms and Conditions	The permit does not convey any property rights of any sort, nor any exclusive privilege.	Yes	N/A – Advisory Provision

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter / Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0923TVP02 – Condition 71	18 AAC 50.326(j)(1), 50.400 & 50.403; AS 37.10.052(b), 11/04; AS 46.14.240, 6/7/03	Administration Fees	Pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-403.	Yes	Records of paid fees
AQ0923TVP02 – Condition 72	18 AAC 50.040(j)(4), 50.035, 50.326(j)(1) & (3), 50.346(b)(1), 50.410 & 50.420	Assessable Emissions	Pay to the Department an annual emission fee based on the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410.	Yes	MR&R in accordance with this condition.
AQ0923TVP02 – Condition 73	18 AAC 50.040(j)(4), 50.326(j)(1) & (3), 50.346(b)(1), 50.410 & 50.420	Assessable Emissions Estimates	No later than March 31 of each year, submit an estimate of the stationary source's assessable emissions as outlined in Conditions 73.1 through 73.3.	Yes	MR&R in accordance with Conditions 73.1 through 73.3.
AQ0923TVP02 – Condition 75	18 AAC 50.045(a)	Dilution	Do not dilute emissions with air to comply with this permit. Monitoring shall consist of an annual certification that the Permittee does not dilute emissions to comply with this permit.	Yes	Annual Compliance Audit
AQ0923TVP02 – Condition 76	18 AAC 50.045(d), 50.040(e), 50.326(j)(3), & 50.346(c)	Reasonable Precautions to Prevent Fugitive Dust	A person who causes or permits bulk materials to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air.	Yes	MR&R in accordance with Conditions 76.1 and 76.2.
AQ0923TVP02 – Condition 77	18 AAC 50.055(g)	Stack Injection	Do not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, except as authorized by a construction permit, Title V permit, or air quality control permit issued before October 1, 2004.	Yes	Annual Compliance Audit

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter / Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0923TVP02 – Condition 78	18 AAC 50.110, 50.040(e), 50.326(j)(3), & 50.346(a); 40 CFR 71.6(a)(3)	Air Pollution Prohibited	No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.	Yes	MR&R in accordance with Conditions 78.1 through 78.5.
AQ0923TVP02 – Condition 80	18 AAC 50.065, 50.040(j), & 50.326(j); 40 CFR 71.6(a)(3)	Open Burning Requirements	If the Permittee conducts open burning at this stationary source, the Permittee shall comply with the requirements of 18 AAC 50.065.	Yes	MR&R in accordance with Conditions 80.1 and 80.2.
AQ0923TVP02 – Condition 81	18 AAC 50.220(a) & 50.345(a) & (k)	Requested Source Tests	Conduct source testing as requested by the Department to determine compliance with applicable permit requirements.	Yes	Source Testing Records
AQ0923TVP02 – Condition 82	18 AAC 50.220(b)	Operating Conditions	Unless otherwise specified by an applicable requirement or test method, conduct source testing at a point or points that characterize the actual discharge into the ambient air; and at the maximum rated burning or operating capacity of the emission unit or another rate determined by the Department to characterize the actual discharge into the ambient air.	Yes	Source Testing Records
AQ0923TVP02 – Condition 83	18 AAC 50.040(c)(32) & 50.220(c)(1)(A) – (F) & (c)(2); 40 CFR 51, 60, and 63	Reference Test Methods	Use the reference test methods when conducting source testing for compliance with this permit as outlined in Conditions 83.1 through 83.6.	Yes	Source Testing Records
AQ0923TVP02 – Condition 84	18 AAC 50.220(c)(3) & 50.990(102)	Excess Air Requirements	To determine compliance with this permit, standard exhaust gas volumes must include only the volume of gases formed from the theoretical combustion of the fuel, plus the excess air volume normal for the specific emission unit type, corrected to standard conditions (dry gas at 68°F and an absolute pressure of 760 millimeters of mercury).	Yes	Source Testing Records

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter / Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0923TVP02 – Condition 85	18 AAC 50.345(a), 50.040(j) & 50.326(j); 40 CFR 71.6(a)	Test Exemption	The Permittee is not required to comply with Conditions 87, 88, and 89 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 2.4), or under Condition 5, 6, or 14.3, or Smoke/No Smoke Plan (Condition 2.5).	Yes	N/A – Advisory Provision
AQ0923TVP02 – Condition 86	18 AAC 50.345(a) & (l)	Test Deadline Extension	The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department’s appropriate division director or designee.	Yes	N/A – Advisory Provision
AQ0923TVP02 – Condition 87	18 AAC 50.345(a) & (m)	Test Plans	Except as provided in Condition 85, before conducting any source tests, submit a plan to the Department.	Yes	MR&R in accordance with this condition.
AQ0923TVP02 – Condition 88	18 AAC 50.345(a) & (n)	Test Notification	Except as provided in Condition 85, at least 10 days before conducting a source test, give the Department written notice of the date and the time the source test will begin.	Yes	Reporting in accordance with this condition.
AQ0923TVP02 – Condition 89	18 AAC 50.345(a) & (o)	Test Reports	Except as provided in Condition 85, within 60 days after completing a source test, submit two copies of the results in the format set out in the Source Test Report Outline, adopted by reference in 18 AAC 50.030.	Yes	Reporting in accordance with this condition.
AQ0923TVP02 – Condition 90	18 AAC 50.326(j); 40 CFR 60.7(f) & 71.6(a)(3)(ii)(B)	Recordkeeping Requirements	Keep all records required by this permit for at least five years after the date of collection.	Yes	Recordkeeping in accordance with Conditions 90.1 and 90.2.

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter / Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0923TVP02 – Condition 91	18 AAC 50.205, 50.326(j)(3), 50.345(a) & (j), & 50.346(b)(10);	Certification	Certify any permit application, report, affirmation, or compliance certification submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source, as outlined in Condition 91.	Yes	Reporting in accordance with Condition 91.
AQ0923TVP02 – Condition 92	18 AAC 50.326(j)(3) & 50.346(b)(10)	Submittals	Unless otherwise directed by the Department or this permit, submit to the Department one certified copy of reports, compliance certifications, and/or other submittals required by this permit, as outlined in Condition 92.	Yes	Reporting in accordance with Condition 92.
AQ0923TVP02 – Condition 93	18 AAC 50.345(a) & (i), 50.200, 50.326(a) & (j); 40 CFR 71.5(a)(2) & 71.6(a)(3)	Information Requests	Furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit, as outlined in Condition 93.	Yes	Recordkeeping and reporting in accordance with Condition 93.
AQ0923TVP02 – Condition 94	18 AAC 50.235(a)(2), 50.240(c), 50.326(j)(3), & 50.346(b)(2) & (3)	Excess Emissions and Permit Deviation Reports	Except as provided in Condition 78, all emissions or operations that exceed or deviate from the requirements of this permit.	Yes	MR&R in accordance with Conditions 94.1a through 94.1c, 94.2, and 94.3.
AQ0923TVP02 – Condition 95	18 AAC 50.346(a) & 50.326(j); 40 CFR 71.6(a)(3)(iii)(A)	Operating Reports	During the life of this permit, submit to the Department an original and one copy of an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.	Yes	MR&R in accordance with Conditions 95.1 through 95.5.
AQ0923TVP02 – Condition 96	18 AAC 50.205, 50.345(a) & (j), 50.326(j); 40 CFR 71.6(c)(5)	Annual Compliance Certification	Each year by March 31, compile and submit to the Department an annual compliance certification report.	Yes	MR&R in accordance with Conditions 96.1 through 96.3.

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter / Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0923TVP02 – Condition 97	18 AAC 50.040(j)(4), 50.200, & 50.346(b)(8) & (9); 40 CFR 51.15, 51.30(a)(1) & (b)(1)	Emission Inventory Reporting	Submit to the Department reports of actual emissions for the previous calendar year, by emissions unit, of CO, NH ₃ , NO _x , PM ₁₀ , PM _{2.5} , SO ₂ , VOC, and lead (Pb) (and lead compounds) using the form in Section 14 of this permit.	Yes	Reporting in accordance with Conditions 97.1 through 97.4.
AQ0923TVP02 – Condition 98	18 AAC 50.326(j)(4) & 50.040(j); 40 CFR 60.13, 63.10(d) & (f), & 71.6(c)(6)	NSPS and NESHAP Reports	Submit NSPS and NESHAP reports, and waivers, to EPA and ADEC, as outlined in Conditions 98.1 and 98.2.	Yes	Reporting in accordance with Conditions 98.1 and 98.2.
AQ0923TVP02 – Condition 99	18 AAC 50.040(j)(7), 50.326(b), & 40 CFR 71.10(d)(1)	Permit Applications and Submittals	Comply with the following requirements for submitting application information to the US Environmental Protection Agency (EPA)	Yes	Comply with Conditions 99.1 through 99.4.
AQ0923TVP02 – Condition 100	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(8)	Emissions Trading	No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit.	Yes	N/A – Advisory Provision
AQ0923TVP02 – Condition 101	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(12)	Off Permit Changes	The Permittee may make changes that are not addressed or prohibited by this permit other than those subject to the requirements of 40 C.F.R. Part 72 through 78 or those that are modifications under any provision of Title I of the Act to be made without a permit revision.	Yes	MR&R in accordance with Conditions 101.1 through 101.4.

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter / Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0923TVP02 – Condition 102	18 AAC 50.040(j)(4) & 50.326(j); 40 CFR 71.6(a)(13)	Operational Flexibility	The Permittee may make CAA Section 502(b)(10) changes within the permitted stationary source without requiring a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions)	Yes	MR&R in accordance with Conditions 102.1 through 102.3.
AQ0923TVP02 – Condition 103	18 AAC 50.040(j)(3), 50.326(c) & (j)(2); 40 CFR 71.5(a)(1)(iii) & 71.7(b) & (c)(1)(ii)	Permit Renewal	To renew this permit, submit to the Department an application under 18 AAC 50.326 no sooner than July 22, 2023 and no later than July 22, 2024.	Yes	Application submittal in accordance with this condition
AQ0923TVP02 – Condition 104	18 AAC 50.326(j)(3) & 50.345(a) & (b)	General Compliance Requirements	Compliance with permit terms and conditions is considered to be compliance with those requirements that are included and specifically identified in the permit; or determined in writing in the permit to be inapplicable.	Yes	N/A – Advisory Provision
AQ0923TVP02 – Condition 105	18 AAC 50.040(j), 326(j) & 50.345(a) & (c)	General Compliance Requirements	Comply with each permit term and condition.	Yes	Annual Compliance Certification, which is included with this application.
AQ0923TVP02 – Condition 106	18 AAC 50.040(j) & 326(j); 40 CFR 71.6(c)(3) & 71.5(c)(8)(iii)(A)	General Compliance Requirements	For applicable requirements with which the stationary source is in compliance, the Permittee will continue to comply with such requirements.	Yes	For applicable requirements with which the Nikaitchuq Development is in compliance, the Nikaitchuq Development will continue to comply with such requirements.
AQ0923TVP02 – Condition 107	18 AAC 50.040(j) & 326(j); 40 CFR 71.6(c)(3) & 71.5(c)(8)(iii)(B)	General Compliance Requirements	For applicable requirements that will become effective during the permit term, the Permittee shall meet such requirements on a timely basis.	Yes	For applicable requirements that will become effective during the permit term, the Nikaitchuq Development will meet such requirements on a timely basis.

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter / Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0923TVP02 – Condition 108	18 AAC 50.326(j)(3) & 50.345(a) & (d)	General Compliance Requirements	It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.	Yes	N/A – Advisory Provision
AQ0923TVP02 – Condition 109	18 AAC 50.326(j)(3) & 50.345(a) & (h)	General Compliance Requirements	Allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to take the actions outlined within this condition.	Yes	Records of full compliance evaluation reports and on-site inspections.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM E3
Title V Condition Change Request

Permit Number: AQ0723TVP02

Title V Permit Information (attach additional sheets as needed):

Current Title V Operating Permit Condition Number	Type of change (revise or remove)	Reason for change	Requested Alaska Title V Operating Permit Condition
Condition 1.1	Revise	Update Condition 1.1 to be consistent with Standard Permit Condition (SPC) VIII – Visible Emissions and Particulate Matter Monitoring Plan for Gas Fuel-Burning Equipment, as revised as of July 22, 2020.	Update to match the recently revised standard permit condition.
Conditions 1.2 and 7.2	Revise	EU ID 69 was removed from service and replaced with an electric unit.	For each of EU IDs ~~69 through~~ 70, 71, 109, 110, 114, and 115
Condition 1.3	Revise	EU IDs 64, 68, and 116 are significant per 18 AAC 50.326(d)(1), but otherwise insignificant based on historical actual emissions. Visible emissions MR&R is only necessary if emissions exceed the significant emissions thresholds. EUs 64, 68, and 116 have historically had actual emissions less than the significant emissions thresholds in 18 AAC 50.326(e).	Update this condition to add EUs 64, 68, and 116. and make consistent with Standard Permit Condition (SPC) IX (Revised July 22, 2020), for emissions units that are significant per 18 AAC 50.326(d)(1) but are otherwise insignificant based on historical actual emissions per 18 AAC 50.326(e). ... ~~and~~ EU ID 50 (fire water pump), <i>EU IDs 64, 68, and 116</i> listed in Table A...
Condition 1.4	Revise	EU ID 107 was removed from service and replaced with an electric unit. Remove EU IDs 64, 68, and 116 from this Condition since these EU IDs are significant per 18 AAC 50.326(d)(1) but are otherwise insignificant based on historical actual emissions per 18 AAC 50.326(e). See requested changes to Condition 1.3.	For the liquid fuel-fired engines, turbines, boilers, and heaters, EU IDs 3, 47, 49, ~~64, 68, 93, 107, and 108 and 116~~ ...
Conditions 2 and 2.1	Revise	EU ID 107 was removed from service and replaced with an electric unit.	...EU IDs 3, 9 through 13, 23, 24, 47, 49, 50, 64, 68, 93, 98 through 101, ~~107, 108,~~ and 116...

FORM E3
Title V Condition Change Request

Condition 6	Remove	EU ID 96 was removed from service and is inoperable.	Please remove condition.
Condition 7	Revise	EU ID 96 was removed from service and is inoperable.	...the gasoline dispensing facility (EU ID 118), ~~and the incinerator (EU ID 96)~~ , listed in Table A...
Condition 7.3	Revise	EU IDs 64, 68, and 116 are significant per 18 AAC 50.326(d)(1), but otherwise insignificant based on historical actual emissions. PM MR&R is only necessary if emissions exceed the significant emissions thresholds. EUs 64, 68, and 116 have historically had actual emissions less than the significant emissions thresholds in 18 AAC 50.326(e).	Update this condition to add EUs 64, 68, and 116. and make consistent with Standard Permit Condition (SPC) IX (Revised July 22, 2020), for emissions units that are significant per 18 AAC 50.326(d)(1) but are otherwise insignificant based on historical actual emissions per 18 AAC 50.326(e). ... ~~and~~ EU ID 50 (fire water pump), <i>EU IDs 64, 68, and 116</i> listed in Table A...
Condition 7.4	Revise	Remove EU IDs 64, 68, and 116 from this Condition since these EU IDs are significant per 18 AAC 50.326(d)(1) but are otherwise insignificant based on historical actual emissions per 18 AAC 50.326(e). See requested changes to Condition 7.3.	For the liquid fuel-fired engines, turbines, boilers, and heaters, EU IDs 3, 47, 49, ~~64, 68, 93, 107, and 108 and 116~~ ...
Condition 7.5	Revise	EU ID 107 was removed from service and replaced with an electric unit.	For the liquid fuel-fired boilers, and heaters, EU IDs ~~407 and 108~~ , EU IDs 9...
Condition 11	Revise	EU ID 107 was removed from service and replaced with an electric unit.	The Permittee shall conduct source tests on EU IDs 9 through 13, EU IDs 23 and 24 (if triggered per Condition 7.3), EU IDs 98 through 101, ~~407~~ , and 108...
Condition 15	Revise	EU IDs 69 and 107 were removed from service and replaced with electric units.	The Permittee shall not cause or allow sulfur compound emissions, expressed as SO ₂ , from EU IDs 1 through 4, 9 through 13, 23, 24, 32, 33, 47, 49, 50, 64, 68, ~~70 through~~ 71, 93 through 95, 98 through 101, 106, ~~108~~ through 116, and 123, listed in Table A to exceed 500 ppm averaged over three hours

FORM E3
Title V Condition Change Request

Condition 21	Revise	EU IDs 69 and 107 were removed from service and replaced with electric units. EU ID 96 was removed from service and is inoperable.	...EU IDs 1, 2, 3, 4, 9 through 13, 23, 24, 32, 33, 47, 49, 50, 64, 68, ~~69~~ , 70, 71, 93 through 95 ~~96~~ , 98 through 101, 106, ~~108~~ through 112, and 114 through 116 listed in Table A to no more than 225 tons...
Condition 21.1d	Revise	EU IDs 69 and 107 were removed from service and replaced with electric units.	Group D (Heaters and Boilers, EU IDs 9 through 13, 23, 24, ~~69~~ , 70, 71, 94, 95, 98 through 101, 106, ~~108~~ through 112, 114, and 115).
Condition 21.1e	Remove	EU ID 96 was removed from service and is inoperable.	Please remove condition.
Condition 23.2b	Revise	EU IDs 69 and 107 were removed from service and replaced with electric units.	The Permittee may use capped stacks for the following units: EU IDs 47, ~~69~~ 70, ~~through~~ 71, 94, 95, ~~and~~ 106, ~~108~~ through 112, 114, and 115.
Condition 29	Remove	EU ID 96 was removed from service and is inoperable.	Please remove condition.
Condition 74	Revise	EU IDs 69 and 107 were removed from service and replaced with electric units. EU ID 96 was removed from service and is inoperable.	The Permittee shall do the following for EU IDs 4, 9 through 20, 23, 24, ~~69~~ through 70, 71, 74, 75, 78, 94, 95, 97 through 105, ~~107~~ ~~108~~ through 110, 111, 112, 114, 115, 117, and 123 through 125:

FORM E4
Permit Shield Request

Permit Number: AQ0923TVP02

Non-applicable requirements (*attach additional sheets as needed*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subpart Cd, D, Da, Db, K, Ka, Kb, L, P, Q, R, DD, AAA, LLL, DDDD, and JJJJ	There is no affected facility within stationary source. Boilers are not subject to D, Da, or Db because all of them are smaller than 100 MMBtu/hr. Storage tanks are exempted from K and Ka because all tanks are less than 40,000 gallons and/or none of the other liquids have a high enough maximum true vapor pressure. Storage tanks are exempted from Subpart Kb because the design capacity of each of tank storing petroleum is less than 1,589.874 m³ and petroleum storage is prior to custody transfer, and none of the other liquids have a high enough maximum true vapor pressure.
40 CFR 61 Subpart J	Stationary source does not contain any equipment in benzene service (>10% by weight).
40 CFR 61 Subpart V	No equipment at the stationary source contains or contacts fluid that is at least 10% benzene or vinyl chloride.
40 CFR 63 Subpart HH	Per 40 CFR 63.760(d), the facility is not subject to the requirements of 40 CFR 63, Subpart HH because the source is an area source of hazardous air pollutants and does not include a triethylene glycol dehydration unit. [40 CFR 63.760(b)(2) and (d)].

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

FORM E5
Alternative Monitoring Procedures (AMP) Form

Permit Number: AQ0923TVP02

Stationary Source-Wide Alternative Monitoring Procedures and/or EPA Waivers (*attach additional sheets as needed*):

Condition for which AMP or EPA waiver is applicable	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
Condition 49.1c	Performance Test Waiver	In each annual performance test, the Permittee may elect to test only one of EUs 1, 2, 32 while operating on natural gas, and 33 if the Permittee satisfies the provisions of Conditions 49.1c(i) through 49.1c(iii).	Yes	Monitoring, recordkeeping, and reporting as required by Conditions 49.1 through 49.4. See performance test waiver letters included with the renewal application in Appendix E.

¹ Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
AIR, WASTE AND TOXICS

MAR 15 2012

Mr. Larry Burgess
HSE Manager – Alaska
Eni US Operating Company, Inc.
3800 Centerpoint Drive, Suite 300
Anchorage, Alaska 99503

Re: Eni US Operating Company, Inc. Oliktok Point Processing Facility
Initial Performance Test Waiver Request
New Source Performance Standards Subpart A – General Provisions
New Source Performance Standards Subpart KKKK – Standards of Performance for
Stationary Combustion Turbines

Dear Mr. Burgess:

The purpose of this letter is to respond to Eni US Operating Co. Inc's (Eni) letter, dated September 25, 2011, requesting the United States Environmental Protection Agency (EPA) to waive the initial performance test for emission unit number (EU No.) 32 (one of four identical gas-fired combustion turbines) at the Oliktok Point Processing Facility, Nikaitchuq Development Site, North Slope, Alaska. Eni also requested that subsequent periodic performance tests be conducted on one of the four combustion turbines.

EU No. 32, as well as the remaining three gas-fired combustion turbine (EU Nos. 1, 2, and 33) are an affected source subject to New Source Performance Standard (NSPS), Subpart A, General Provisions, and NSPS Subpart KKKK, Standards of Performance for Stationary Combustion Turbines. Pursuant to NSPS § 60.7(a)(1), Eni provided the EPA with notification on September 9, 2010 that construction of three identical Solar Taurus 70-10301S turbines¹ (EU Nos. 1, 2 and 33) commenced when Eni entered into a contractual obligation to purchase the units. Eni also provided notification to the EPA on February 17, 2012, that the forth-identical Solar Taurus 70-10301S turbine² (EU No. 32) commenced construction onsite on September 15, 2011. All four turbines each have a maximum power output of 7,520 kWe and burn natural gas.

On July 20, 2011, the EPA approved Eni's request to waive the initial performance test for one of three turbines identified as EU Nos. 1, 2, and 33 in Air Quality Control Minor Permit No. AQ0923MSS05. Eni is now asking the EPA to waive the initial performance test for EU No. 32.

¹ These turbines are identified as EU Nos. 1, 2 and 33 in Air Quality Control Minor Permit No. AQ0923MSS05, issued by the Alaska Department of Environmental Conservation (ADEC).

² This turbine is identified as EU No 32 in Air Quality Control Minor Permit No. AQ0923MSS05, issued by the ADEC

Pursuant to NSPS § 60.4400(a), EU No. 32 must comply with the emission standard for NO_x found in Table 1 to the subpart. NSPS § 60.8(a) requires an initial performance test to be conducted within 60 days of achieving maximum production rates but no later than 180 days after initial startup. EU Nos. 1 and 33 were tested in March 2011 and demonstrated compliance with the NO_x emission limit.³ According to Eni, as of February 29, 2012, the construction of EU No. 32 was not complete and the EU did not commenced initial startup.

According to NSPS § 60.8(b)(4), the EPA can waive a performance test if the owner/operator has demonstrated by other means that the affected facility is in compliance with the standard. Based on the EPA's review of the information presented by Eni and the NSPS Subpart A, the EPA grants Eni's request to waive the initial performance test for the Solar Taurus 70-10301S combustion turbine, Model AA28223000, Serial Number 23877-01 (EU No. 32). This March 14, 2012, initial subsequent performance test waiver is being combined with the EPA's July 20, 2011, initial subsequent performance test waiver applicable to Solar Taurus 70-10301S combustion turbine, Model AA28223000, Serial Numbers 21213-01 (EU No. 1), 21213-02 (EU No. 2), 23877-01 (EU No. 32), and 21213-03 (EU No. 33). (SEE Enclosure A)

Eni is required, as part of this waiver, to conduct subsequent performance tests on a different Solar Taurus 70-10301S (EU No. 1, 2, 32, or 33) combustion turbine so that by the end of the initial performance test and the three subsequent performance tests, all four turbines will be tested. In the event any subsequent performance test result is greater than 50 percent of the NO_x NSPS of 150 ppm, Eni will be required to conduct performance test on the Solar Taurus 70-10301S combustion turbine within 60 days of that test. Pursuant to NSPS §60.4375(b), a written report of the performance test should be submitted to the EPA. Once Eni can demonstrate that the NO_x performance test for all four Solar Taurus 70-10301S combustion turbine is less than or equal to 50 percent of the standard, Eni may continue to use this waiver.

The initial performance test waiver granted to Eni for three of four Solar Taurus combustion turbines and waiver of subsequent performance tests at the Oliktok Point Processing Facility at the Nikaitchuq Development Site does not alter the other requirements of NSPS Subparts A and KKKK. If you have questions regarding this response, please contact Natasha Greaves at (206) 553-7079.

Sincerely,


Krishna Viswanathan, Manager
Federal Delegated & Federal Programs

Enclosure

³ Emissions were less than 10 % of the allowable NO_x emission rate in Table 1 of the Subpart.

ENCLOSURE A



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10

1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

JUL 20 2011

OFFICE OF
AIR WASTE AND TOXICS

Mr. Larry Burgess
HSE Manager – Alaska
Eni us operating company incorporated
3800 Centerpoint Drive, Suite 300
Anchorage, Alaska 99503

Re: Eni us operating co. inc. Oliktok Point Processing Facility
Initial Performance Test Waiver Request
New Source Performance Standards Subpart A – General Provisions
New Source Performance Standards Subpart KKKK – Standards of Performance for Stationary
Combustion Turbines

Dear Mr. Burgess:

The purpose of this letter is to respond to eni us operating co. inc's letter, dated July 14, 2011, requesting the United States Environmental Protection Agency to waive the initial performance test for one of three identical gas-fired combustion turbines at the Oliktok Point Processing Facility, Nikaitchuq Development Site, North Slope, Alaska.

The turbine is an affected source subject to New Source Performance Standard (NSPS), Subpart A, General Provisions, and NSPS Subpart KKKK, Standards of Performance for Stationary Combustion Turbines. Pursuant to NSPS § 60.7(a)(1), eni provided EPA with notification on September 9, 2010, that construction of three identical Solar Taurus 70-10301S turbines had commenced when eni entered into a contractual obligation to purchase the units. These turbines each have a maximum power output of 7,520 kWe and burn natural gas. These turbines are identified as Emission Units 1, 2 and 33 in Air Quality Control Minor Permit No. AQ0923MSS05, issued by the Alaska Department of Environmental Conservation.

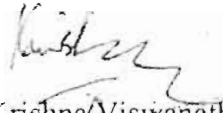
Pursuant to NSPS § 60.4400(a), EU numbers 1, 2 and 33 must comply with the emission standard for NO_x found in Table 1 to the subpart. NSPS § 60.8(a) requires an initial performance test to be conducted within 60 days of achieving maximum production rates but no later than 180 days after initial startup. EU numbers 1 and 33 were tested in March 2011, and demonstrated compliance with the NO_x emission limit.¹ EU 2 is now approaching the 180 day testing deadline after initial startup and has not yet conducted a performance test.

According to NSPS § 60.8(b)(4), EPA can waive a performance test if the owner/operator has demonstrated by other means that the affected facility is in compliance with the standard. Based on EPA's review of NSPS Subpart A, EPA grants eni's request to waive the initial performance test for the Solar Taurus 70-10301S combustion turbine, Model AA28223000, Serial Number 21213-02 (EU No. 2).

¹ Emissions were less than 10 % of the allowable NO_x emission rate in Table 1 of the Subpart.

The initial performance test waiver granted to eni for one Solar Taurus combustion turbine at the Oliktok Point Processing Facility at the Nikaitchuq Development Site does not alter the other requirements of NSPS Subparts A and KKKK. If you have questions regarding this response, please contact John Pavitt of the Alaska Operations Office, at (907) 271-3688.

Sincerely,



Krishna Viswanathan, Acting Manager
Federal and Delegated Programs Unit

cc: Jim Baumgartner, ADEC, Juneau
ADEC Compliance Technician, Fairbanks
Dani Baldwin, SLR International Corp.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
AIR, WASTE AND TOXICS

APR 26 2012

Mr. Larry Burgess
HSE Manager – Alaska
Eni US Operating Company, Inc.
3800 Centerpoint Drive, Suite 300
Anchorage, Alaska 99503

Re: Eni US Operating Company, Inc. Oliktok Point Processing Facility
Initial Performance Test Waiver Request - Clarification
New Source Performance Standards Subpart A – General Provisions
New Source Performance Standards Subpart KKKK – Standards of Performance for
Stationary Combustion Turbines

Dear Mr. Burgess:

The purpose of this letter is to provide clarification to Eni US Operating Co. Inc. (Eni), on the United States Environmental Protection Agency's (EPA) March 15, 2012, letter, waiving the initial and subsequent performance test for four identical gas-fired combustion turbines at the Oliktok Point Processing Facility, Nikaitchuq Development Site, North Slope, Alaska. (SEE Enclosure A)

The initial and subsequent performance test waiver applies to four Solar Taurus 70-10301S turbines (EU Nos. 1, 2, 32 and 33). In the March 15, 2012, letter, EPA stated that "In the event any subsequent performance test result is greater than 50 percent of the NO_x NSPS of 150 ppm, Eni will be required to conduct performance test on the Solar Taurus 70-10301S combustion turbine within 60 days of that test. Pursuant to NSPS §60.4375(b), a written report of the performance test should be submitted to the EPA. Once Eni can demonstrate that the NO_x performance test for all four Solar Taurus 70-10301S combustion turbine is less than or equal to 50 percent of the standard, Eni may continue to use this waiver."

With this letter, EPA is clarifying that if a subsequent performance test result is greater than 50 percent of the NO_x NSPS of 150 ppm, Eni is required to conduct a performance test of each of

Eni US Operating Co. Inc. Oliktok Point Processing Facility
NSPS KKKK Initial and Subsequent Performance Test Waiver - Clarification
April 26, 2012
Page 2 of 2

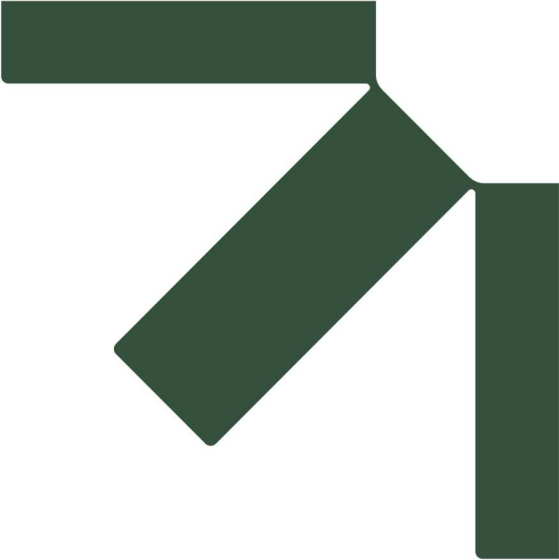
the remaining Solar Taurus combustion turbines within 60 days of receiving the final test report.
This clarification does not alter the other requirements of NSPS Subparts A and KKKK. If you
have questions regarding this response, please contact Natasha Greaves at (206) 553-7079.

Sincerely,



Krishna Viswanathan, Manager
Federal Delegated & Federal Programs

Enclosure



Appendix F Permits

Application for Renewal of an Air Quality Title V Operating Permit

Nikaitchuq Development

Eni US Operating Co. Inc.

July 22, 2024



F.1 Permit No. AQ00923MSS11

F.2 Permit No. AQ0923TVP02

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY CONTROL MINOR PERMIT

Permit: AQ0923MSS11

Final – June 12, 2017

Rescinds Permit: AQ0923MSS10

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit AQ0923MSS10 to the Permittee listed below.

Permittee: **Eni US Operating Co. Inc.**
3800 Centerpoint Drive, Suite 300
Anchorage, AK 99503
(907) 865-3300

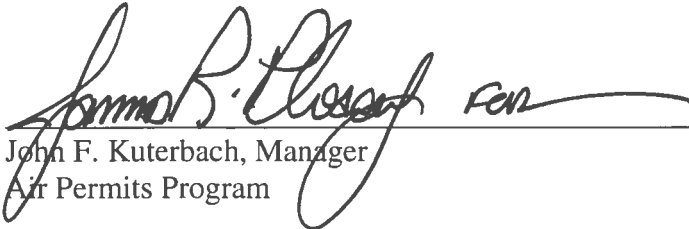
Stationary Source: Nikaitchuq Development

Permit Contact: Whitney Grande (907) 865-3300; whitney.grande@enipetroleum.com

Project: Nikaitchuq North Exploratory Drilling Program

The Permittee requested Minor Permit AQ0923MSS11 under 18 AAC 50.508(6) in order to revise or rescind the terms and conditions of a Title I permit.

This permit satisfies the obligation of the Permittee to obtain a minor permit under these provisions. As required by AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this minor permit. This permit authorizes the Permittee to operate under its terms and conditions, and as described in the original permit application, and subsequent application supplements listed in Section 10 except as otherwise specified in this permit.



John F. Kuterbach, Manager
Air Permits Program

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Section 1. Emission Unit Inventory

- Emission Units (EU) Authorization.** The Permittee is authorized to install and operate the EUs listed in Table 1 per the terms and conditions of this permit. Except as noted elsewhere in the permit, the information in Table 1 is for identification purposes only. The specific EU descriptions do not restrict the Permittee from replacing an EU identified in Table 1 with one of the same nominal rating and fuel type. The Permittee shall comply with all applicable provisions of AS 46.14 and 18 AAC 50 when installing a replacement EU, including any applicable minor or construction permit requirements.

Table 1 –Minor Permit Emission Unit Inventory

Site	EU	Emission Unit Description	Make / Model	Fuel	Rating / Size
Oliktok Production Pad (OPP)	1	Gas Turbine #1	Solar Taurus 70	Fuel Gas	8,250 kW
	2	Gas Turbine #2	Solar Taurus 70	Fuel Gas	8,250 kW
	32	Dual Fuel Turbine #3	Solar Taurus 70	Fuel Gas	8,250 kW
			Solar Taurus 70	Diesel	7,700 kW
	33	Gas Turbine #4	Solar Taurus 70	Fuel Gas	8,250 kW
	3	Standby Generator Reciprocating Engine	Detroit Diesel T1638A36	Diesel	2,500 kW
	4	Daily Purge & Pilot Operation	Process Safety Flares	Fuel Gas	0.36 MMscf/day
		Low Pressure Emergency Operation			7 MMscf/day
	5	Various Tank #1	Process Tank	N/A	750 barrels
	6	Various Tank #2	Process Tank	N/A	750 barrels
	34	Various Tank #3	Process Tank	N/A	750 barrels
	35	Various Tank #4	Process Tank	N/A	750 barrels
	36	Various Tank #5	Process Tank	N/A	750 barrels
	37	Various Tank #6	Process Tank	N/A	750 barrels
	38	Various Tank #7	Process Tank	N/A	750 barrels
	39	Various Tank #8	Process Tank	N/A	750 barrels
	40	Various Tank #9	Process Tank	N/A	750 barrels
	41	Various Tank #10	Process Tank	N/A	750 barrels
	8	Base Oil	Storage Tank	N/A	400 barrels
	43	Corrosion Inhibitor Storage Tank	Storage Tank	N/A	600 barrels
	44	Antifoam Storage Tank #1	Storage Tank	N/A	200 barrels
	45	Scale Inhibitor Storage Tank #2	Storage Tank	N/A	200 barrels
	46	Emulsion Breaker Storage Tank	Storage Tank	N/A	200 barrels
	69	OPP WIF Boiler #1	Weil McLain 780	Diesel	0.935 MMBtu/hr
	70	OPP WIF Boiler #2	Weil McLain 780	Diesel	0.935 MMBtu/hr
	71	OPP WIF Boiler #3	Weil McLain 780	Diesel	0.935 MMBtu/hr
	106	Standby Heater	Newpoint Thermal	Fuel Gas	10.5 MMBtu/hr
	78	Construction Power Generator #1(NRE)	Caterpillar 3616C	Diesel	2,763 bhp
Nikaitchuq Operations Center (NOC)	93	Standby Generator Reciprocating Engine	Detroit Diesel R1638A36	Diesel	1,495 bhp
	94	NOC Camp Boiler #1	Fulton Reliance	Propane	2 MMBtu/hr
	95	NOC Camp Boiler #2	Fulton Reliance	Propane	2 MMBtu/hr
	97	Construction Power Generator #2 (NRE)	CAT C-32	Diesel	1,381 bhp

	111	NOC Warm Storage Boiler #1	Weil-McLain 780	Propane	0.935 MMBtu/hr
	112	NOC Warm Storage Boiler #2	Weil-McLain 780	Propane	0.935 MMBtu/hr
	118	Gasoline Dispensing Facility	N/A	N/A	12,000 gallons
	120	Diesel Tank (Dispensing Facility)	N/A	N/A	12,000 gallons
	121	Diesel Tank (Dispensing Facility)	N/A	N/A	12,000 gallons
	122	Diesel Tank (Dispensing Facility)	N/A	N/A	12,000 gallons
Spy Island Drillsite (SID)	47	Standby Generator E04 Reciprocating Engine	MTU 16V 4000 G83	Diesel	3,351 bhp
	49	Standby Generator E07 Reciprocating Engine	Caterpillar 3516C	Diesel	3,635 bhp
	50	Fire Water Pump	John Deere 6068 E	Diesel	183 bhp
	51	Diesel Storage Tank A	Storage Tank	N/A	750 barrels
	52	Diesel Storage Tank B	Storage Tank	N/A	750 barrels
	53	Diesel Storage Tank C	Storage Tank	N/A	750 barrels
	54	Friction Reducer Tank D	Process Tank	N/A	750 barrels
	55	Friction Reducer Tank E	Process Tank	N/A	750 barrels
	56	Corrosion Inhibitor Tank F	Process Tank	N/A	750 barrels
	57	Scale Inhibitor Tank G	Process Tank	N/A	400 barrels
	58	Emulsion Breaker Tank H	Process Tank	N/A	750 barrels
	59	Future Tank I	Process Tank	N/A	750 barrels
	60	Contaminated Base Oil/Diesel Tank J	Process Tank	N/A	200 barrels
	61	Emulsion Breaker Tank K	Process Tank	N/A	750 barrels
	62	Chemical Tank L	Process Tank	N/A	750 barrels
	63	Disposal Fluids Tank U	Process Tank	N/A	1,000 barrels
	96	Multiple Chamber Incinerator	Pennram ESS C-300	Wastes	300 lb/hr
	107	Tent Heating Boiler #1	Burnham V1110-WO	Diesel	2.43 MMBtu/hr
	108	Tent Heating Boiler #2	Burnham V1110-WO	Diesel	2.43 MMBtu/hr
	109	WIF Boiler #1	Burnham FD-38	Diesel	1.73 MMBtu/hr
	110	WIF Boiler #2	Burnham FD-38	Diesel	1.73 MMBtu/hr
	114	Mud Tank Farm Boiler #2	Burnham FD-14	Diesel	0.65 MMBtu/hr
	115	Mud Tank Farm Boiler #1	Burnham FD-14	Diesel	0.65 MMBtu/hr
	64	WIF Generator Reciprocating Engine	J. Deere 6090HF485	Diesel	422 bhp
	68	WIF Cement Pump Engine #1	Detroit Diesel 8V-71N	Diesel	320 bhp
	116	WIF Cement Pump Engine #2	Detroit Diesel 8V-71N	Diesel	320 bhp
	123	Construction Well Test Flare	Pilot, Purge and Process Gas	Fuel Gas	3 MMscf/day

Table Notes:

- The turbine ratings are based on 100 percent operation and 0 degrees Fahrenheit.
- The Permittee may install Waste Heat Recovery Units (WHRU) on the Gas Turbines (EUs 1, 2, 32, and 33) to provide process and space heat. The WHRU shall not include supplemental burners.
- The Permittee shall not use EUs 5 and 6 for routine flow-through of sales-quality crude oil.
- The process safety flare (EU 4B, emergency operation) is rated at 50 MMscf/day for high pressure operation
- NRE means Nonroad Engine. All other EUs are stationary
- N/A means Not Applicable or Not Available
- Emissions from the Construction Well Test Flare (EU 123) are associated with ‘temporary construction activities’ and are not included when determining stationary source classification under this permit action. As indicated by the application for AQ0923MSS11, flaring operations will not exceed 24 consecutive months.

- Operation of Construction Well Test Flare:** The Permittee shall notify the Department in accordance with Condition 25 upon startup of EU 123 and when it has been removed from the source.

3. Operation of Drilling Rigs: The Permittee is authorized to operate two drilling rigs in accordance with the terms and conditions of this permit and the minor permit application.

3.1 EUs 9 through 18, 74, and 75 (On-Shore Drilling Rig) presented in Table 2 are collectively referred to as the “Nabors 245E Drilling Rig”.

- a. The actual drilling rig operated may be similar or smaller than the Nabors 245E Drilling Rig. In all situations, the cumulative boiler and heater rating shall not exceed 19.3 MMBtu/hr and the cumulative engine rating shall not exceed 5,400 bhp

Table 2: On-Shore Development Drilling Rig

EU	EU Description	Make / Model	Rating
9	Rig Boiler #1	Cleaver Brooks CB100-100	4.2 MMBtu/hr
10	Rig Boiler #2	Cleaver Brooks CB100-100	4.2 MMBtu/hr
11	Rig Heater #1	Tioga 1DF-21B0	4.2 MMBtu/hr
12	Rig Heater #2	Tioga 1DF-21B0	4.2 MMBtu/hr
13	Rig Heater #3	Tioga 1DF-11C0	2.5 MMBtu/hr
14	Rig Engine #1 (NRE)	Caterpillar D399	1,128 bhp
15	Rig Engine #2 (NRE)	Caterpillar D399	1,128 bhp
16	Rig Engine #3 (NRE)	Caterpillar D399	1,128 bhp
17	Rig Engine #4 (NRE)	Caterpillar D399	1,128 bhp
18	Coldstart Motors (NRE)	Caterpillar D353	233 bhp
74	Reciprocating Engine #1 (NRE)	Cummins	303 bhp
75	Reciprocating Engine #2 (NRE)	Cummins	303 bhp

Table Notes:

All of the EUs listed in table are diesel-fired

NRE means Nonroad Engine

3.2 EUs 98 through 105, 117, 124, and 125 (Off-Shore Development Drilling Rig) listed in Table 3 are collectively referred to as the “Doyon Drilling Rig (DDR)”.

- a. The actual drilling rig operated may be similar or smaller than the DDR. In all situations, the cumulative boiler and heater rating shall not exceed 16.9 MMBtu/hr and the cumulative engine rating shall not exceed 14,500 bhp.

Table 3: Offshore Development Drilling Rig Emission Units

EU	EU Description	Make / Model	Rating
98	Rig Boiler #1	Superior Boiler	4.184 MMBtu/hr
99	Rig Boiler #2	Superior Boiler	4.184 MMBtu/hr
100	Rig Heater #1	Dick’s Air Heater	3.5 MMBtu/hr
101	Rig Heater #2	Dick’s Air Heater	5.0 MMBtu/hr
102	Reciprocating Engine #1 (NRE)	Caterpillar 3516	2,523 bhp
103	Reciprocating Engine #2 (NRE)	Caterpillar 3516	2,523 bhp
104	Reciprocating Engine #3 (NRE)	Caterpillar 3516	2,523 bhp
105	Reciprocating Engine #4 (NRE)	Caterpillar 3512	1,879 bhp
117	Mud Pump #3 Coldstart (NRE)	DEUTZ AG	63 bhp
124	Reciprocating Engine #5 (NRE)	Caterpillar 3516B	2,150 bhp
125	Reciprocating Engine #6 (NRE)	Caterpillar 3516C	2,722 bhp

Table Notes:

All of the emission units are diesel-fired

NRE means Nonroad Engine

4. **Operation of Intermittent Well Servicing Equipment:** The Permittee is authorized to periodically operate intermittent well servicing equipment listed in Table 4 in accordance with the terms and conditions of this permit¹

4.1 EUs listed in Table 4 are collectively called “Workover Rig”.

4.2 The actual Workover Rigs operated under this permit may be similar or smaller than the Workover Rig presented in Table 4. In all situations, the cumulative boiler / heater rating of the EUs in the Workover Rig shall not exceed 15.5 MMBtu/hr and the cumulative engine rating of EUs in the Workover Rig shall not exceed 1,225 bhp.

Table 4: Partial List of Intermittent Well Servicing Equipment

EU	EU Description	Make / Model	Rating
19	Peak Crane (NRE)	To Be Determined	500 tons, 650 bhp
20	Manitowoc Crane (NRE)		300 tons, 575 bhp
23	Hot Oiler Boiler / Heater #1		6 MMBtu/hr
24	Hot Oiler Boiler / Heater #2		9.5 MMBtu/hr

Table Notes:

All of the emission units are diesel-fired, except the portable flare.

NRE means Nonroad Engine

5. **Labeling of EUs:** Label each EU listed in Table 1 with the EU within 30 days of installing the EU. Place the ID in a conspicuous location on or adjacent to the EU.
6. **Emissions and Fuel Control Settings and Stacks of Turbines:** For EUs 1, 2, 32, and 33, if the Permittee makes changes to the emission and fuel control settings and stacks, the Permittee shall provide the revised settings and the reason for the revision in the applicable operating report described in the operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50.
7. **Emissions and Fuel Control Settings of Engines:** If the Permittee makes changes to the emission and fuel control settings on any of the EUs 3, 47, 49, 50, 64, 68, 93, and 116, the Permittee shall provide the revised settings and the reason for the revision in the applicable operating report described in the operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50.
8. **Submission of Drilling Rig Information:** Upon subsequent revisions to the EU inventory of the selected drilling rig, submit to the Department’s Fairbanks Office:
- 8.1 The name of the selected drilling rigs (e.g., Nabors 245E, DDR);
- 8.2 an EU inventory listing each combustion unit in the drilling rig, along with the make, model, and rating of each combustion unit;
- 8.3 the cumulative capacity of the Drilling Rig engines;
- 8.4 the cumulative capacity of the drilling rig boilers / heaters; and

¹ In all cases, intermittent well servicing equipment must be portable and operated on a periodic and temporary basis in a manner consistent with the nonroad engine rule adopted by reference in 18 AAC 50.100.

8.5 a statement as to whether the selected drilling rig complies with Condition 3.1a and Condition 3.2a.

- 9. Excess Emissions and Permit Deviation Reports:** As described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, if the cumulative EU rating limits under Conditions 3 or 4 are exceeded, or if any of Conditions 5 through 8 are not met submit an excess emissions and permit deviation report.

Section 2.State Emission Standards

- 10. Industrial Process and Fuel Burning Equipment Visible Emissions (VE).** Permittee shall not cause or allow VE, excluding condensed water vapor, emitted from stationary EUs 1, 2, 3, 4, 32, 33, 47, 49, 50, 64, 68, 69 through 71, 93 through 95, and 106 through 112, 114 through 116, and 123 listed in Table 1; EUs 9 through 13 listed in Table 2; EUs 98 through 101 listed in Table 3; and EUs 23 and 24 listed in Table 4 to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.
- 11. Incinerator VE.** The Permittee shall not cause or allow VE, excluding condensed water vapor, through the exhaust of EU 96 listed in Table 1 to reduce visibility by more than 20 percent averaged over any six consecutive minutes.
- 12. Industrial Process and Fuel-Burning Equipment Particulate Matter (PM).** The Permittee shall not cause or allow PM emitted from stationary EUs 1, 2, 3, 4, 32, 33, 47, 49, 50, 64, 68, 69 through 71, 93 through 95, 106 through 112, 114 through 116, and 123 listed in Table 1, EUs 9 through 13 listed in Table 2, EUs 98 through 101 listed in Table 3, and EUs 23 and 24 listed in Table 4 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.
 - 12.1 The Permittee shall comply with Condition 12 by complying with Condition 10.
- 13. Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from stationary EUs 1, 2, 3, 4, 32, 33, 47, 49, 50, 64, 68, 69 through 71, 93 through 95, 106 through 112, 114 through 116, and 123 listed in Table 1, EUs 9 through 13 listed in Table 2, EUs 98 through 101 listed in Table 3, and EUs 23 and 24 listed in Table 4 to exceed 500 ppm averaged over three hours.
 - 13.1 The Permittee shall comply with Condition 13 by complying with Condition 19.

Section 3. Requirements to Avoid PSD Classification

14. Carbon Monoxide (CO) and Nitrogen Oxides (NOx) Limits

14.1 CO and NOx emissions from stationary EUs 1, 2, 3, 4, 32, 33, 47, 49, 50, 64, 68, 69, 70, 71, 93 through 96, 106 through 112, and 114 through 116 listed in Table 1; EUs 9 through 13 listed in Table 2; EUs 98 through 101 listed in Table 3; and EUs 23 and 24 listed in Table 4 shall not exceed 225 tons per 12-month rolling period for each pollutant. Monitor and record as follows (Data selection and recording may be electronic):

- a. Group A (Fuel Gas-fired Solar Taurus 70 Gas Turbines - EUs 1, 2, 32 (when firing fuel gas), and 33. For Group A,
 - (i) Capture the *60-second average load* in percent of full load and the *60-second average inlet air temperature* in degrees Fahrenheit (°F) for each EU during all periods of operation. Record for each calendar day, the minimum *60-second average load* and the minimum *60-second average inlet air temperature*.
 - (ii) Except as noted below, round the *60-second average load* up to the next higher load and round the *60-second air inlet temperature* down to the next lower inlet air temperature presented in Table A-1 and Table A-2 of Appendix A. Consider all *60-second average loads* between 40 percent (inclusive) and 45 percent (exclusive), as 40 percent loads.
 - (iii) Using the method described in Condition 14.1a(iv), determine the pounds (lb) of CO and NOx emitted during the 60-second period for the given *60-second average load* and *60-second average inlet air temperature*, as rounded under Condition 14.1a(ii). For each hour, calculate and record the hourly CO and NOx emissions in lb.
 - (iv) When calculating the CO and NOx emissions under Condition 14.1a(iii), the Permittee must use either the pounds per minute (lb/min) CO and NOx emission values listed in Table A-1 and Table A-2 of Appendix A or Department-approved substitute lb/min values. Use one of the following approaches if a parameter measured under Condition 14.1a is missing or suspect. Note which approach is used (if applicable) in the operating report described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50.
 - (A) If the *60-second average load* is unknown or suspect, use the largest lb/min CO and NOx emissions value in Table A-1 and Table A-2 of Appendix A (or the substitute worst-case lb/min value) for the given inlet air temperature; or
 - (B) If the *60-second average inlet temperature* is unknown or suspect:
 - (1) use the largest lb/min CO and NOx emissions value in Table A-1 and Table A-2 of Appendix A (or the worst-

- case lb/min value) for the given load; or
- (2) obtain the ambient temperature measured by the National Weather Service (NWS) at the Deadhorse Airport for each hour of missing inlet air temperature and use the NWS temperature in lieu of the inlet air temperature when calculating the pounds of CO and NO_x under Condition 14.1a(iii).
 - (C) If the *60-second average load* and the *60-second average inlet air temperature* are both unknown or suspect, use 17.03 lb/min for CO emissions calculations and 0.78 lb/min for NO_x emissions calculations or Department-approved substitute maximum lb/min values.
 - (v) By the end of each calendar month, calculate and record the *monthly CO and NO_x emissions* (in lb) for each EU, the *cumulative monthly CO and NO_x emissions* (in lb), and the *12-month rolling CO and NO_x emissions* in tons for the previous month.
- b. Group B (Diesel Internal Combustion Engines - EUs 3, 47, 49, 50, 64, 68, 93, and 116). For Group B,
- (i) Maintain a dedicated engine hour meter on each EU listing in Condition 14.1b.
 - (ii) Calculate and record the *monthly CO and NO_x emissions* in pounds (lb) for each EU, as follows:
 - (A) For each calendar month, monitor and record the *total monthly hours of operation* of the EU.
 - (B) By the end of each month, calculate the *monthly CO and NO_x emissions* (in lb) for the previous month for each EU using a Department approved emission factor.² If the *total monthly hours of operation* is unknown or suspect, use the total hours for that month.
 - (iii) By the end of each calendar month, calculate and record the *cumulative monthly CO and NO_x emissions* (in lb) and the *12-month rolling CO and NO_x emissions* (in tons).
- c. Group C (Flares – EU 4). For Group C,
- (i) Monitor and record the volume of flared gas in standard million cubic feet (MMscf) on a monthly basis.

² Emission Factor determined from performance tests, provided by equipment manufacturer, listed in Table A-3, or derived from emission factors listed in Table A-3.

- (ii) By the end of each month, calculate, and record the *monthly CO and NOx emissions* (in lb) by using a representative fuel gas analysis and the emission factors: 0.31 lb/MMBtu to calculate the CO emissions and 0.068 lb/MMBtu to calculate the monthly NOx emissions.
 - (iii) By the end of each calendar month, calculate and record the *12-month rolling CO and NOx emissions (in tons)*.
- d. Group D (Heaters and Boilers - EUs 9 through 13, 23, 24, 69, 70, 71, 94, 95, 98 through 101, 106 through 112, 114, and 115): For Group D,
 - (i) Determine and record the *monthly hours of operation* for each EU using one of the following three methods. The Permittee does not need to use the same method for all EUs. Identify the method selected for each EU in the applicable operating report described in the operating permit issued to the source under AS 46.14.130 and 18 AAC 50.
 - (A) Daily Operation Method
 - (1) For each calendar day, monitor and record whether the EU was operated.
 - (2) By the end of each calendar month, calculate the *monthly hours of operation* during the previous month by multiplying the days operated by 24 hours.
 - (B) Hourly Operation Method
 - (1) Monitor and record each start-up and shutdown time.
 - (2) By the end of each calendar month, review the start-up and shutdown times during the previous month and determine the *monthly hours of operation*. Round portions of an hour up to the next quarter hour fraction.
 - (C) Monthly Operation Method. For each EU with an hour meter, for each calendar month monitor and record the total monthly hours of operation.
 - (ii) By the end of each calendar month, calculate, and record the *monthly CO and NOx emissions* (in lb) of each
 - (A) diesel-fired EU during the previous month using the emission factors: 0.0417 lb/MMBtu for CO emissions and 0.1667 lb/MMBtu for NOx emissions.
 - (B) propane-fired EU during the previous month using the emission factors: 0.0829 lb/MMBtu for CO emissions and 0.1436 lb/MMBtu for NOx emissions.
 - (C) fuel-gas fired EU during the previous month using the emission factors: 84 lb/MMscf for CO emissions and 100 lb/MMscf for NOx emissions.

- (iii) By the end of each calendar month, calculate, and record the *cumulative monthly CO and NOx emissions* (in pounds) and the *12-month rolling CO and NOx emissions* (in tons).
 - e. Group E (Incinerator - EU 96): For Group E,
 - (i) Determine and record the *monthly amount of waste burned* (in tons) for EU 96.
 - (ii) By the end of each calendar month, calculate, and record the *monthly CO and NOx emissions* (in lb) using the emission factors: 10 lb/ton for CO emissions and 3 lb/ton for NOx emissions.
 - (iii) By the end of each calendar month, calculate, and record the *cumulative monthly CO and NOx emissions* (in pounds) and the *12-month rolling CO and NOx emissions* (in tons).
 - f. Group F (EU 32 when firing Liquid Fuel): For EU 32 when firing liquid fuel,
 - (i) By the end of each calendar month, calculate, and record the *monthly CO and NOx emissions* (in lb) using the emission factors: 10 lb/hr for CO emissions and by 31.5 lb/hr for NOx emissions.
 - (ii) By the end of each calendar month, calculate, and record the *cumulative monthly CO and NOx emissions* (in lb) and the *12-month rolling CO and NOx emissions* (in tons).
 - g. By the end of each calendar month, calculate and record the *Total 12-Month Rolling CO and NOx Emissions* (in tons) for Groups A through F.
- 14.2 Report the *Total 12-Month Rolling CO and NOx Emissions* calculated under Condition 14.1g for each 12-month period as follows:
 - a. In the operating report described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50; and
 - b. As excess emissions and permit deviation as specified in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, if the emissions exceed 225 tons.
- 14.3 In each operating report submitted in accordance with the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, report
 - a. For each month of the reporting period:
 - (i) The range of inlet air temperatures recorded for EUs 1, 2, 32 (when burning fuel gas and when burning liquid fuel) and 33 during the month: and
 - (ii) Any periods where the monitoring equipment or electronic algorithm required under Condition 14.1, was malfunctioning or inoperable. Specify the malfunctioning or inoperable item with each period.

Section 4. Ambient Air Quality Protection Requirements

15. General Ambient Air Quality Provisions. Comply with the following provisions to protect the NO₂, SO₂, and PM-10 air quality standards:

15.1 Air Quality Boundary: Establish and maintain the ambient boundaries using the procedures described in Condition 16.

15.2 Stack Configuration:

- a. For all stationary fuel EUs listed in Table 1, Table 2, Table 3, or Table 4 maintain each exhaust stack with uncapped, vertical outlets – flapper valves, or similar devices, are allowed for these EUs as long as they do not hinder the vertical momentum of the exhaust plume.
 - (i) Eni may use capped stacks for the following units: EUs 47, 69-71, 94, 95, 106-112, 114, and 115.
 - (ii) Intermittent well service equipment rated at less than 400 bhp or 2.8 MMBtu/hr (as applicable) are exempt from Condition 15.2a.
- b. Maintain the exhaust stack for each EU listed in Table 5 with a release height (above ground) that meets or exceeds the indicated height.

Table 5: Minimum Stack Height Requirements

EU	Emission Unit Description	Minimum Release Height Above Ground (m)
1, 2, 32, and 33	Gas Turbines #1 through #4	28.0
3	Standby Generator Reciprocating Engine	7.0
47	Standby Generator E04 Reciprocating Engine	8.2
9-13	On-Shore Rig Heaters #1 through #3 and Boilers #1 and #2	12.8
49	Standby Generator E07 Reciprocating Engine	12.8
50	Fire Water Pump	11.7
14-17	On-Shore Rig Engines #1 through #4 (NRE)	14.8
64	WIF Generator Reciprocating Engine	11.3
68	WIF Cement Pump Engine #1	6.4
78	Construction Power Generator #1 (NRE)	6.1
93	Standby Generator Reciprocating Engine	6.0
94 and 95	NOC Camp Boilers #1 and #2	7.7
98 and 99	Offshore Rig Boilers #1 and #2	11.6
100	Offshore Rig Heater #1	12.6
101	Offshore Rig Heater #2	12.1
102, 103, and 104	Offshore Rig Reciprocating Engines #1 through #3 (NRE)	13.0
105	Offshore Rig Reciprocating Engine #4 (NRE)	12.2
106	Standby Heater	8.0
116	WIF Cement Pump Engine #2	6.4

15.3 On-Site Housing: If providing on-site housing, follow the procedures described in Condition 17.

15.4 Cumulative Capacity: Comply with each cumulative capacity limit in Condition 3.1a, 3.2a, and 4.2. Monitor, record, and report in accordance with Conditions 8 and 9.

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- 16. Public Access Control Plan³.** Establish and maintain the ambient air boundaries as follows:
- 16.1 Comply with the provisions contained in the “Nikaitchuq Project Public Access Control Plan” (as provided in Appendix B), or a subsequent written version approved by the Department that contains at least the following elements:
- a. a scaled map that clearly shows the ambient air boundaries, coast line, spill response boat ramp, Kuparuk Seawater Treatment Plant, Oliktok Road, and warning sign locations;
 - b. ambient boundaries that are consistent with the land owner’s authorization to preclude public access from the area within the boundaries;
 - c. defined methods of establishing and maintaining the boundary, such as surveillance and posting of strategically located warning signs (provide size, wording, and inspection/repair schedule);
 - d. the date of the Public Access Control Plan; and
 - e. the procedure for approaching unauthorized people who have crossed the ambient air boundary.
- 16.2 Post and maintain all warning signs described in the Public Access Control Plan as follows:
- a. post all signs as stated in the Public Access Control Plan;
 - b. use a font, font size and contrast coloring that makes all lettering easy to read;
 - c. inspect and repair the signs according to the schedule described in the Public Access Control Plan; and
 - d. keep all signs free of nearby visible obstructions (including wind-blown snow), as safety allows.
- 17.** Comply with the provisions contained in the November 6, 2009 “Eni Local Policy” (as provided in Appendix C), or a subsequent written version approved by the Department that contains at least the following elements:
- 17.1 a statement specifying that the worker housing area is for official business / worker use only; and
- 17.2 a statement specifying that the on-site workers are on 24-hour call.
- 18. Annual Average NO₂ and SO₂ Ambient Air Quality Protection:** Protect the Annual Average NO₂ and SO₂ ambient air quality standards as described in Condition 18.1 and Condition 18.2:
- 18.1 Limit the operation of EUs listed in Table 6 as follows:

³ Public Access Control Plan as provided by Eni and presented in Appendix B. Eni revised the original plan.

- a. Maintain a dedicated engine hour meter on each EU listed in Table 6.
- b. For each calendar month, monitor and record the total hours of operation during the month of each EU listed in Table 6.
- c. By the end of each month, calculate and record the cumulative hours of operation during the previous 12 months for each EU listed in Table 6.
- d. Report the hours recorded under Condition 18.1b and 18.1c as follows:
 - (i) In the operating report required by the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, for each month covered by the reporting period; and
 - (ii) As excess emissions and permit deviations, as described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, if the operating hours exceed the limits listed in Table 6.

Table 6: Annual Operating Limits of Emission Units

EU	Emission Unit Description	Operating Limit
3	Standby Generator Reciprocating Engine	2,000 hr/yr
32	Dual Fuel-Fired Turbine	600 hr/yr (when firing diesel); unlimited operation when firing gaseous fuel
49	Standby Generator Engine E07 Reciprocating Engine	2,000 hr/yr
50	Fire Water Pump	100 hr/yr
78	Construction Power Generator #1 (NRE)	1,500 hr/yr
93	Standby Generator-Reciprocating Engine	500 hr/yr

18.2 Limit the operation of the Workover Rig to 55 days per consecutive 12-month period as follows:

- a. For each calendar month in which the Workover Rig is on site, monitor and record the total days of operation during the month. Days of operation includes movement between wellheads but does not include transportation to and from the Nikaitchuq onshore and offshore pads.
- b. By the end of each calendar month, calculate and record the cumulative days of operation during the previous 12 months. During the initial 12 months of operation, use the operating period to date as a substitute for the 12-month period.
- c. Report the days recorded under Condition 18.2a as follows:
 - (i) In the operating report required by the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, for each month of the reporting period; and
 - (ii) As excess emissions and permit deviations, as described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, if the days exceed the limit specified in Condition 18.2.

18.3 Limit the operation of EU 123 to 120 days per consecutive 12-month period as follows:

- a. For each calendar month in which EU 123 is on site, monitor and record the total days of operation during the month.
- b. By the end of each calendar month, calculate and record the cumulative days of operation during the previous 12 months. During the initial 12 months of operation, use the operating period to date as a substitute for the 12-month period.
- c. Report the days recorded under Condition 18.3b as follows:
 - (i) In the operating report required by the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, for each month of the operating period; and
 - (ii) As excess emissions and permit deviations, as described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, if the days exceed the limit specified in Condition 18.3.

19. Annual, 24-hr, and 3-hr Average SO₂ Ambient Air Quality Protection. Protect the Annual, 24-hr, and 3-hr Average SO₂ ambient air quality standards as follows:

19.1 For EUs 1, 2, 4, 32 (while burning natural gas), 33, and 106, burn only natural gas with hydrogen sulfide (H₂S) content not exceeding 250 ppmv (on an instantaneous basis at standard conditions).

- a. Monitor compliance monthly using ASTM D 4810-88, D 4913-89, or Gas Producers Association 2377-86, or an alternative analytical method approved by the Department.
- b. The records of the monitoring conducted under Condition 19.1a may be kept in electronic format.
- c. Report the results of the monitoring conducted under Condition 19.1a as follows:
 - (i) In the operating report required by the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, for each month of the reporting period, as applicable; and
 - (ii) As excess emissions and permit deviations, as described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, if the H₂S content of the fuel gas exceeds the limit specified in Condition 19.1 at any time.

19.2 For diesel burning EUs, burn only ultra low sulfur diesel (ULSD) fuel.

- a. For each shipment of fuel, keep receipts that specify fuel grade and amount.
- b. Clearly label the fuel tanks for the diesel burning EUs as “ULSD Only”.
- c. Report in the operating report required by the applicable operating permit

issued for the source under AS 46.14.130(b) and 18 AAC 50, the sulfur content of the diesel fuel burned, or a statement that only ULSD was burned during the applicable reporting period, in each of the EUs.

- d. Report under excess emissions and permit deviations, as described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, if the sulfur content of the diesel fuel burned in any EU exceeds 15 ppmw.

19.3 For propane burning EUs, burn only propane with sulfur content not exceeding 185 ppmw.

- a. For each shipment of fuel, keep receipts that specify fuel grade and amount.
- b. Clearly label the fuel tanks for the propane burning EUs as “Propane Only”.
- c. Report in the operating report required by the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, the sulfur content of the fuel burned, or a statement that the sulfur content of the propane did not exceed 185 ppmw during the applicable reporting period, in each EU.
- d. Report under excess emissions and permit deviations, as described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, if the sulfur content of the propane fuel burned in any EU exceeds 185 ppmw.

Section 5. Assessable Emissions and Estimates

20. Assessable Emissions

20.1 The Permittee shall pay to the Department annual emission fees based on the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities greater than 10 tons per year (tpy). The quantity for which fees will be assessed is the lesser of:

- a. The stationary source's assessable potential to emit 645 tpy; or
- b. The stationary source's projected annual rate of emissions that will occur from July 1st to the following June 30th, based upon actual annual emissions emitted during the most recent calendar year or another consecutive 12-month period approved in writing by the Department when demonstrated by:
 - (i) An enforceable test method described in 18 AAC 50.220;
 - (ii) Emission factors provided by manufacturers of the equipment;
 - (iii) Material balance calculations;
 - (iv) Emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
 - (v) Other methods and calculations approved by the Department.

21. Assessable Emission Estimates

21.1 Emission fees will be assessed as follows:

- a. no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., P.O. Box 111800 Juneau, AK 99811-1800; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or
- b. if no estimate is received on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in Condition 20.1a.

Section 6. Limit to Avoid Source Testing When Operating EU 32 on ULSD

- 22. Operation Hours on ULSD:** The Permittee shall operate EU 32 on ULSD for no more than 600 hours per consecutive 12 months.

22.1 Monitor, record, and report as follows:

- a. Install, maintain and operate a non-resettable hour meter on EU 32.
- b. Monitor and record monthly operating hours for EU 32 when using diesel fuel except when conducting a source test required in an operating permit.
- c. By the end of each calendar month, calculate the 12-month total operating hours for the previous month for EU 32 when using ULSD.
- d. If the 12-month rolling total operating hours for EU 32 when operating on ULSD recorded in Condition 22.1c exceeds the limit in Condition 22,
 - (i) report as excess emissions and permit deviations, as described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50;
 - (ii) within 60 days after the permit deviation report under Condition 22.1d(i) is due, submit to the Department a complete plan for conducting a source test to verify NO_x and CO emission factors specified in Condition 14.1f using the applicable test methods set out in 40 CFR Part 60, Appendix A. The Permittee may propose alternative test methods if it can be shown to be of equivalent accuracy, and will ensure compliance with the applicable standards or limits. The Department must approve the source test plan prior to the test date;
 - (iii) conduct a source test within 180 days of Department approval of the plan submitted under Condition 22.1d(ii);
 - (iv) within 60 days after completion of the source test required under Condition 22.1d(iii), submit the results; and
 - (v) in the source test report submitted under Condition 22.1d(iv) compare the NO_x and CO emissions factors in lb/min to the NO_x and CO emission factors specified in Condition 14.1f. Propose for Department approval revised NO_x and CO emission factors in lb/min if source test results exceed the NO_x and CO emission factors specified in Condition 14.1f.
- e. Include the records of the 12-months totals recorded in Condition 22.1c in each operating report required by the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, for each month of the reporting period.

Section 7. Requirements for Composition of Wastes Burned in Incinerators

- 23. Composition of Wastes Burned in Incinerators:** Limit the amount of hospital wastes, medical wastes, and infectious wastes combusted in the incinerator, EU 96, to less than 10 percent by weight of the wastes and fuels combusted on a calendar quarter basis in each incinerator. Monitor, record, and report as follows:
- 23.1 Keep records on a calendar quarter basis of the weight of hospital waste, medical waste, infectious waste, and all other fuels and wastes combusted.
 - 23.2 At the end each of calendar month, calculate and record the percent by weight of hospital wastes, medical wastes, and infectious wastes in the total amount of material combusted.
 - 23.3 Report in the operating report required by the applicable operating permit issued to the source under AS 46.14.130(b) and 18 AAC 50, the percent of hospital wastes, medical wastes, and infectious wastes in the total wastes calculated in Condition 23.2 for each calendar quarter in the reporting period.
 - 23.4 Report as a permit deviation in the Excess Emissions and Deviations Report, as described in the applicable operating permit issued for the source under AS 46.14.130(b) and 18 AAC 50, if the percent of hospital wastes, medical wastes, and infectious wastes in the total wastes calculated in Condition 23.2 for each calendar quarter in the reporting period is not less than 10 percent.

Section 8. General Record Keeping, Reporting, and Compliance Requirements

- 24. Certification.** The Permittee shall certify all reports, or other documents submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: “Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.” Excess emissions reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.
- 25. Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall send one copy of reports, compliance certifications, and other submittals required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, emission source test reports, or other records under a cover letter certified in accordance with Condition 24.
- 26. Information Requests.** The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke, reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the federal administrator.
- 27. Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:
- 27.1 Copies of all reports and certifications submitted pursuant to this section of the permit.
- 27.2 Records of all monitoring required by this permit, and information about the monitoring including:
- the date, place, and time of sampling or measurements;
 - the date(s) analyses were performed;
 - the company or entity that performed the analyses;
 - the analytical techniques or methods used;
 - the results of such analyses; and,
 - the operating conditions as existing at the time of sampling or measurement.

Section 9. Terms to Make Permit Enforceable

28. The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for
 - 28.1 an enforcement action; or
 - 28.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280.
29. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.
30. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.
31. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
32. The permit does not convey any property rights of any sort, nor any exclusive privilege.
33. The Permittee shall allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to
 - 33.1 enter upon the premises where an emission unit subject to the permit is located or where records required by the permit are kept;
 - 33.2 have access to and copy any records required by the permit;
 - 33.3 inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and
 - 33.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

Section 10. Permit Documentation

April 9, 2009	Application for AQ0923MSS04 received
May 5, 2006	Permit No. AQ0923MSS01 Technical Analysis Report.
April 9, 2009	Minor permit application submitted by Eni for the Nikaitchuq Development.
October 21, 2009	Minor permit application addendum submitted by Eni for Nikaitchuq Development containing revised Public Access Control Plan and turbine emission factors spreadsheet.
November 6, 2009	Minor permit application addendum submitted by Eni for Nikaitchuq Development containing revised Eni Working Times and Hours Policy document and emission calculations spreadsheet.
December 9, 2009	Minor permit application addendum submitted by Eni for Nikaitchuq Development containing AERMET Stage 3 modeling files.
December 14, 2009	Minor permit application addendum submitted by Eni for Nikaitchuq Development containing BPIP modeling files.
December 18, 2009	Minor permit application addendum submitted by Eni for Nikaitchuq Development containing revised modeling files.
March 8, 2010	Comments submitted by the North Slope Borough on preliminary decision to approve application
March 19, 2010	Comments submitted by the Kuukpiik Corporation on preliminary decision to approve application
March 19, 2010	Comments submitted by Eni on preliminary decision to approve application
April 30, 2010	AQ0923MSS04 issued
June 18, 2010	Application for AQ0923MSS05 to revise AQ0923MSS04 received
August 1, 2010	Eni revised application for Minor Permit AQ0923MSS04.
August 6, 2010	The Department wrote to Eni that emission estimates from spreadsheets included in its application were inconsistent with emission factors, equipment ratings, and fuel characteristics.
August 23, 2010	Chris Menefee submitted revised application that updated the emissions estimated in previous submissions.
November 10, 2010	In an email to Eni and Chris Menefee of Hoefler Consulting (Eni's consultants), the Department proposed rescinding Minor Permit AQ0923MSS04 instead of revising it. Chris Menefee agreed to the new minor permit rescinding Minor Permit AQ0923MSS04.

December 22, 2010	Comments submitted by Eni on preliminary decision to approve application.
December 30, 2010	Department issues AQ0923MSS05
December 30, 2010	Eni submits application to revise Minor Permit AQ0923MSS05
February 25, 2011	Eni revises its application and submits revised calculations.
May 17, 2011	Eni revises application and requests that the Department to allow stationary boilers to have capped exhausts. Eni submitted revised screening to support the requested revision.
July 29, 2011	Eni submits comments on preliminary permit the Department sent out for public notice.
August 11, 2011	Department issues Minor Permit AQ0923MSS06
January 18, 2012	Department receives Eni's application for AQ0923MSS07 to revise AQ0923MSS06
May 8, 2012	Eni submits application for AQ0923MSS08 requesting authorization to convert one of the turbines to dual fuel firing capability.
October 1, 2012	Department issues Minor Permit AQ0923MSS08
November 27, 2012	Department issues Minor Permit AQ0923MSS07
November 27, 2012	Eni submits application for AQ0923MSS09 requesting revisions to AQ0923MSS07
February 8, 2013	Eni submits addendum to application for AQ0923MSS09
June 10, 2013	Eni submits comments on preliminary documents for AQ0923MSS09
June 27, 2013	Eni submits request to withdraw some of their comments on preliminary documents for AQ0923MSS09
August 3, 2015	Eni submits application to revise Minor Permit AQ0923MSS09
January 13, 2016	Department issues Minor Permit AQ0923MSS10
February 22, 2017	Eni submits application to revise Minor Permit AQ0923MSS10

Section 11. Appendix A: Emission Factors (EFs)⁴

Table A-1 presents EFs for the Solar Taurus Turbines, EUs 1, 2, 32 (when burning fuel gas), and 33. The EFs reflect the results of the source test Eni conducted in March 2011.

Table A-1: Solar Taurus NOx EFs (lb/min) at Selected Ambient Temperatures

Percent Load	NOx EFs (lb/min) at Indicated Ambient Temperature				
	60°F	30°F	0°F	-20°F	-60°F
10	0.10	0.11	0.11	0.25	0.26
20	0.13	0.13	0.14	0.29	0.31
30	0.16	0.16	0.17	0.34	0.35
40	0.19	0.20	0.28	0.38	0.40
45-49 ^a	0.19	0.20	0.20	0.38	0.40
45-49 ^b	0.05	0.05	0.06	0.16	0.51
50	0.05	0.05	0.06	0.16	0.51
60	0.05	0.06	0.06	0.18	0.56
70	0.06	0.06	0.07	0.20	0.62
80	0.06	0.07	0.07	0.43	0.66
90	0.07	0.07	0.08	0.43	0.72
100	0.07	0.08	0.09	0.25	0.78

Table Notes:

^a: Out of SoLoNOx

^b: In SoLoNOx

Table A-2: Solar Taurus CO EFs (lb/min) at Selected Ambient Temperatures

Percent Load	CO EFs (lb/min) at Indicated Ambient Temperature				
	60°F	30°F	0°F	-20°F	-60°F
10	11.25	11.52	11.87	12.03	12.67
20	12.50	12.70	12.70	12.70	12.70
30	12.70	12.70	12.70	12.70	12.70
40	12.70	12.70	12.70	12.70	17.03
45-49 ^a	12.70	12.70	12.70	12.70	17.03
45-49 ^b	0.06	0.01	0.01	0.01	0.46
50	0.06	0.01	0.01	0.01	0.46
60	0.05	0.01	0.01	0.01	0.43
70	0.06	0.01	0.01	0.01	0.47
80	0.06	0.01	0.01	0.01	0.51
90	0.07	0.01	0.01	0.01	0.54
100	0.07	0.08	0.09	0.36	0.60

Table Notes:

^a: Out of SoLoNOx

^b: In SoLoNOx

⁴ The hierarchy of Department-approved emission factors (EFs) is as follows:

EFs determined from performance tests (Table A-1); provided by equipment manufacturer, listed in Table A-3

Table A-3: Average EFs of Stationary Combustion EUs

Emission Unit	NOx	CO	Units of EF	Reference for Emission Factors
1, 2, and 33	5.1	5.2	lb/hr	Vendor data
32 (burning fuel gas)	5.1	5.2	lb/hr	Vendor data
32 (burning ULSD)	31.5	10	lb/hr	Vendor data (from AQ0923MSS08)
3	49.59	6.46	lb/hr	Vendor data
4	0.068	0.31	lb/MMBtu	AP-42, Table 13.5-1
47	6.71	0.88	g/bhp-hr	Vendor data
49	42.46	3.92	lb/hr	Vendor data
50	2.5	1.10	g/bhp-hr	Vendor data
64	3.45	0.54	g/bhp-hr	Vendor data
68 and 116	0.031	0.00668	lb/bhp-hr	AP-42, Table 3.3-1
96	3	10	lb/ton	AP-42, Table 2.1-12
	0.45	1.5	lb/hr	From rating & AP-42, Table 2.1-12
9-13, 23-24, 69-71, 98-101, 107-110, 114, and 115	20	5	lb/1,000 gal	AP-42, Table 1.3-1, 3
106	100	84	lb/MMscf	AP-42, Table 1.4-2
94, 95, 111, and 112	13	7.5	lb/1,000 gal	AP-42, Table 1.5-1
	0.1436	0.0829	lb/MMBtu	AP-42, Table 1.5-1 & fuel properties
93	20.6	2.0	lb/hr	Vendor data

Table Notes

For EUs 1, 2, 32 (when burning fuel gas), and 33, EFs in Table A-1 and Table A-2 supersede EFs in Table A-3
The Department used EFs in Table A-3 for EUs 1, 2, 32, and 33 for calculation purposes to estimate emissions.

Section 12. Appendix B: Public Access Control Plan

Public Access Control Plan

Eni US Operating Co. Inc.

July 2015

Purpose

This Public Access Control Plan for the Nikaitchuq Project is designed to protect the general public from health and safety hazards that could occur as a result of heavy industrial work during well drilling, work-over activities, and crude oil production at Nikaitchuq. Eni US Operating Co. Inc. (Eni) has established these reasonable restrictions on general public access to ensure adequate protection of public health and welfare.

Eni is committed to fully and adequately protecting the health and safety of its work force by remaining within the standards for air exposure of the Occupational Safety and Health Administration (OSHA) and, where the general public has access, the National and Alaska Ambient Air Quality Standards (AAQS). The primary purpose of this plan is to delineate the area to be protected and controlled for occupational health and safety from the area that is subject to unrestricted, general public access where the AAQS are applicable. By limiting access to Nikaitchuq Project Facilities to Eni authorized personnel, Eni will reduce the chance that a member of the general public will be injured or otherwise impacted by Eni operations.

This plan ensures that reasonable measures are in place to accomplish reasonable restrictions on public access.

General Information

Eni operates the Oliktok Point Processing Facility and associated production well network from a 600 foot by 600 gravel pad constructed on Oliktok Point (see Figure 1). Eni has constructed a gravel island approximately 3.5 miles north of the Oliktok Point Processing Facility to drill and install wells. The island will be approximately 630 feet wide and 830 feet long. Personnel responsible for the operation of the Nikaitchuq project are housed at the Nikaitchuq Operations Center (NOC), south of the Oliktok Point Processing Facility.

Eni will restrict access to the on-shore production facility, the off-shore gravel island and the personnel housing camps to Eni authorized personnel for health and safety and property control reasons. As a result, the ambient air boundary is marked by the edge of the gravel production and personnel camp pads and the off-shore gravel island with signs and reflective boundary markers that will delineate the controlled area. This is consistent with other ambient air boundary selections that have been made for similar facilities and circumstances on the North Slope. To accommodate the required safety zone for the processing facility safety flare, a gravel

triangle will be constructed on the south side of the pad that will extend some portions of the on-shore gravel pad up to 170 feet to the south.

Drilling, crude oil production and three-phase fluid processing will be conducted on the on-shore gravel pad. Drilling and crude oil production will occur on the off-shore gravel island. Three phase fluid that is produced from the off-shore gravel island will be shipped via sub-sea pipeline to the Oliktok Point Processing Facility. Once development drilling and construction is completed on the off-shore gravel island, the island will be unoccupied with the exception of occasional maintenance activities. Operations on the off-shore gravel island will be monitored and controlled from the Oliktok Point Processing Facility. Remote monitoring systems will be installed on the off-shore gravel island to detect the presence of unauthorized personnel on the off-shore gravel island. Public access will be restricted at the edge of the of the gravel pad at the Oliktok Point Processing Facility, the NOC, and the off-shore gravel island.

The ambient boundary for the Oliktok Point Processing Facility will be marked on the east side by the west edge of the Oliktok road that provides access to the Kuparuk Seawater Treatment Plant (KSTP). The edge of the processing facility gravel pad will mark the north, south, and west ambient boundaries. The south edge of the NOC is marked by the north edge of the DS3Q access road. The east, north, and west edges of the NOC are marked by the gravel pad edge of the NOC.

Ambient air quality receptors were modeled on the Oliktok and DS3Q access roads and on the processing facility, and the NOC pad boundaries. The modeled concentrations on the roads and the pad boundaries show ambient air concentrations below the AAQS. Ambient air quality receptors were also modeled on the toe of the off-shore gravel island facility and the modeled concentrations on the toe of off-shore gravel island were also below the AAQS.

Eni will also establish a second boundary to ensure public safety during flaring by keeping the public a safe distance from the flare at all times. The safe distance from the flare is a semi-circle with a 170 foot radius centered on the extreme southern edge of the pad extension that contains the flare.

The ambient boundary for the off-shore gravel island will be marked along the edge of the off-shore gravel island and the ocean. The top of the off-shore gravel island is approximately 18 feet above sea level.

Public Access Control Measures

The Oliktok Point Processing Facility is located on Oliktok Point, which is a peninsula that is surrounded on three sides by the Beaufort Sea and is located within the Kuparuk River Unit (KRU). The KRU is controlled and operated by Conoco-Philips Alaska Incorporated (CPAI). Access to the KRU is controlled by CPAI. The only access to the Oliktok Point Processing Facility is from the south via the Oliktok Rd. Personnel are not allowed to travel to Oliktok Point without first obtaining permission from CPAI.

Personnel traveling to the KSTP will travel on the Oliktok Rd. passing east of the Oliktok Point Processing Facility. Personnel traveling to the KSTP will not need to cross or access the Oliktok Point Processing Facility in order to access the KSTP. KSTP personnel will not be allowed to enter the Oliktok Point Processing Facility without first obtaining permission from the operator of the Oliktok Point Processing Facility. As a practical matter, few people are likely to visit or traverse the area in which Nikaitchuq development and crude oil production will be located. However, road access by personnel without permission from CPAI to be in the area is possible. As a result, several measures will be implemented to reasonably ensure that unauthorized personnel do not access the Oliktok Point Processing Facility. These measures include:

1. Signs;
2. Pad boundary markers;
3. Education and training; and
4. Pad surveillance and exclusion.

The above listed measures will also be used to ensure that unauthorized personnel do not access the NOC, and off-shore gravel island, although the probability of unauthorized access to the gravel island is even less likely than the Oliktok Processing Facility. Details about the public access control measures are presented below.

Signs

To notify unauthorized personnel that they may not access the Oliktok Point Processing Facility, the NOC, and the off-shore gravel island, signs will be posted at strategic locations, as follows:

- On the northeast, northwest, southeast, and southwest corners of the Oliktok Point Processing Facility
- At designated points of ingress and egress from the Oliktok Point Processing Facility, and the NOC; and
- At the top of the two access ramps to the off-shore gravel island.

The sign specifications are:

- Each sign will be 4 feet by 6 feet and will be supported by sawhorse or pallet post with sandbags.
- Each sign will be inspected regularly and will be repaired or replaced, as necessary.

- Each sign will be free of visible obstructions.
- Each sign will read:

Eni US Operating Co. Inc.
DANGER
UNAUTHORIZED PERSONNEL
KEEP OUT If access is requested,
Contact Eni Security

In addition to the warning signs, reflective, boundary markers will be placed in the following locations:

- Along the eastern production pad border between the Oliktok Rd. and the Oliktok Point Processing Facility;
- Along the northern edge of the Oliktok Point Processing Facility pad separating it from the adjacent KSTP pad; and
- Along the southern edge of the NOC pad edge and the DS 3Q access road.

Reflective boundary markers will be used. In order to distinguish the pad boundary markers from the reflective road edge markers that are used on the North Slope, the pad boundary markers will be spaced at approximately fifty percent of the spacing that is normally used for road edge markers on the North Slope.

Education and Training

To work in or access Nikaitchuq, all personnel must have completed or be escorted by someone who has completed the 8-hour North Slope Training Cooperative course. One rule that is emphasized in the training for North Slope workers is to be present only in locations where they are authorized to be. North Slope workers that are present at sites where they are not authorized are subject to discipline up to and including termination of employment. Additionally, during their local orientation training Eni workers and Eni contractors that will be working at the Oliktok Point Processing Facility and the gravel island will be made aware of this Public Access Control plan and that if they notice unauthorized personnel at the Oliktok Point Processing Facility, the NOC or the gravel island that they should notify appropriate personnel that an unauthorized person or persons are in Oliktok Point Processing Facility, the NOC, or the gravel pad.

Pad Boundary Surveillance

Unless prohibited by adverse weather conditions or similar safety related circumstances, the Oliktok Point Processing Facility, and the NOC will be formally checked at least twice a day. During these checks of the pad boundary, the inspector will check the following items:

1. The presence or indications of the presence, of unauthorized personnel within the Oliktok Point Processing Facility boundary;
2. That the pad boundary warning signs are clear of obstructions such as snow and are still standing. If possible, the inspector will fix sign problems when they are discovered; and
3. That the reflective pad boundary markers that delineate the northern and eastern pad boundaries are in place and are intact. If possible, the inspector will fix problems with the

reflective pad boundary markers when they are discovered.

In addition to the formal pad inspections, all Eni personnel and Eni contractors will be responsible for maintaining Oliktok Point Processing Facility, the NOC, and the gravel island boundary integrity. When Eni personnel or Eni contractors notice either unauthorized persons within the pad boundaries or conditions that compromise the integrity of the pad boundaries, they are required to either correct the situation or notify appropriate personnel that have the authority to remedy the situation.

The gravel island will follow the same procedures that will be used for the Oliktok Point Processing Facility when Eni personnel or Eni contractors are present on the gravel island for construction, drilling, or maintenance activities. When the gravel island is unoccupied, the pad boundary will be monitored remotely from the Oliktok Point Processing Facility. If unauthorized personnel are present on the island, when the island is unoccupied, the person would not be exposed to pollutants exceeding the AAQS because with exception of the emergency generator, no emission units will be operating on the island when Eni or Eni contractor personnel are not present on the island.

Pad Boundary Violations

In the event that an unauthorized person enters the Oliktok Point Processing Facility, the NOC, or the offshore gravel island, they will be notified by a representative of Eni that they are not allowed within the perimeter of the Nikaitchuq facility without prior approval and will be escorted off the pad by a representative of Eni. The incident will be recorded in the Security Desk Log and will list the person's name (if the unauthorized visitor will provide his name), the mode of travel, and the date and time of the incident.

Figure 1. Oliktok Point Processing Facility Ambient Air Boundary.

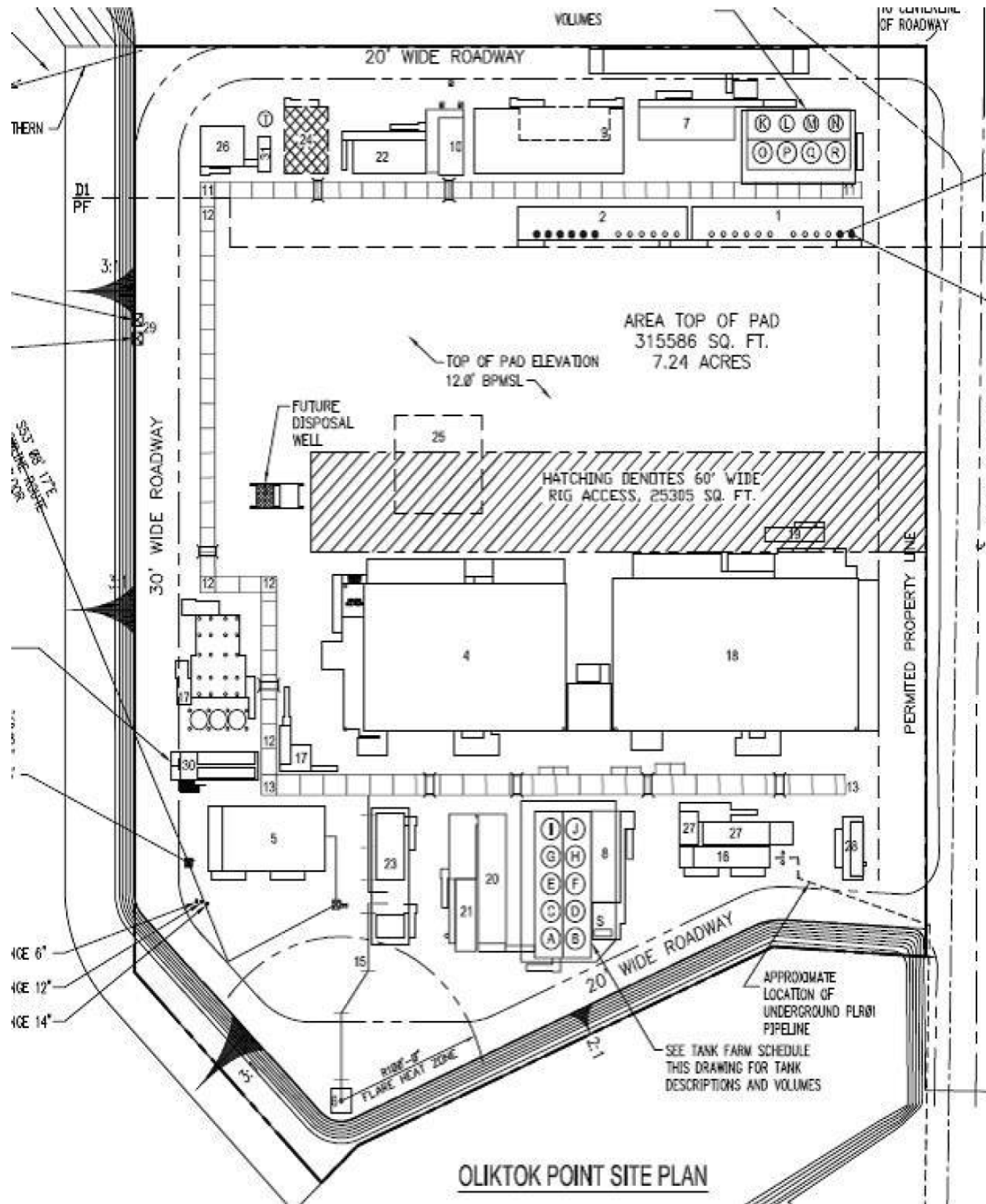


Figure 2. Off-Shore Oliktok Point Gravel Island

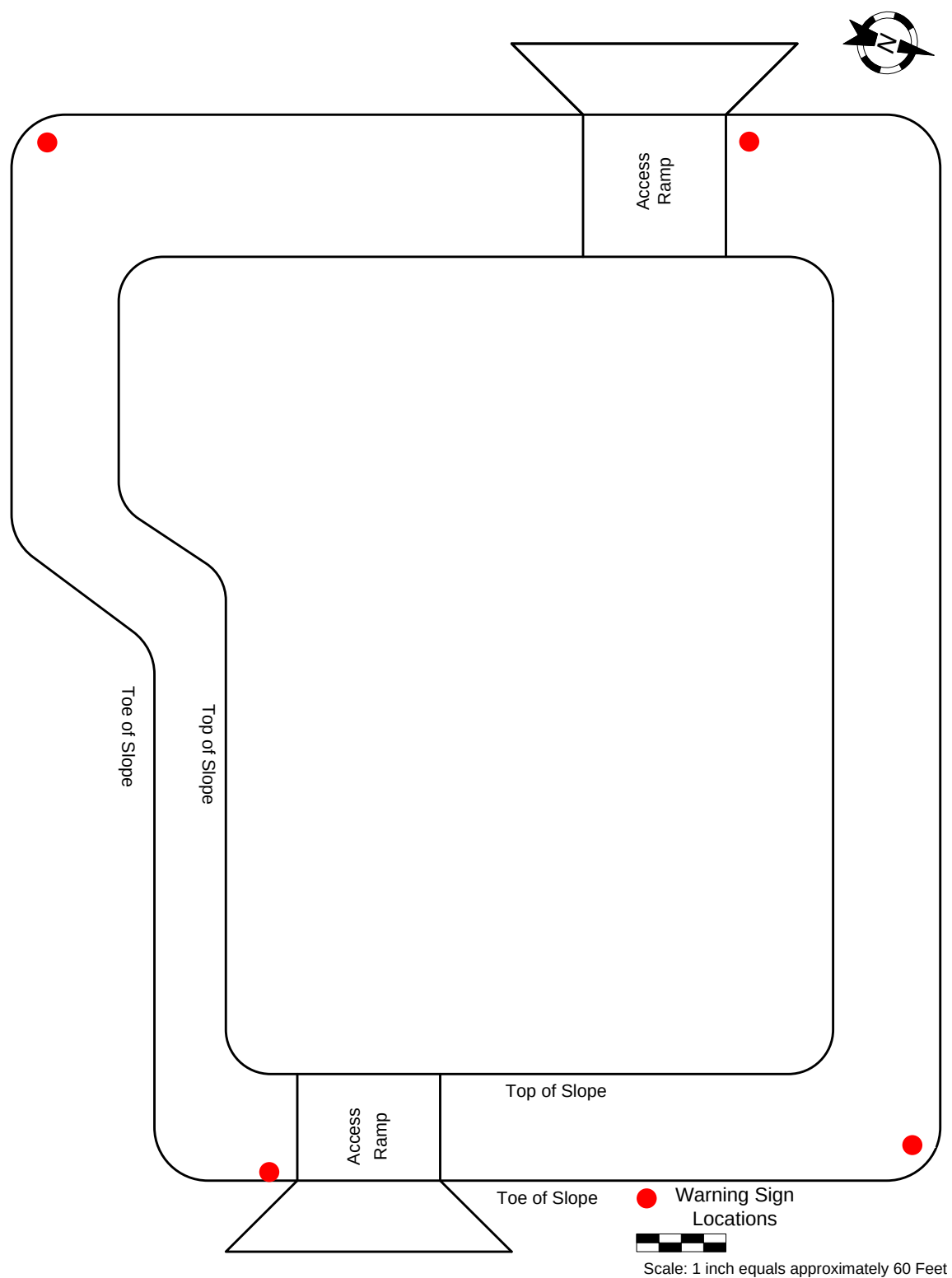


Figure 3. Nikaitchuq Operations Camp

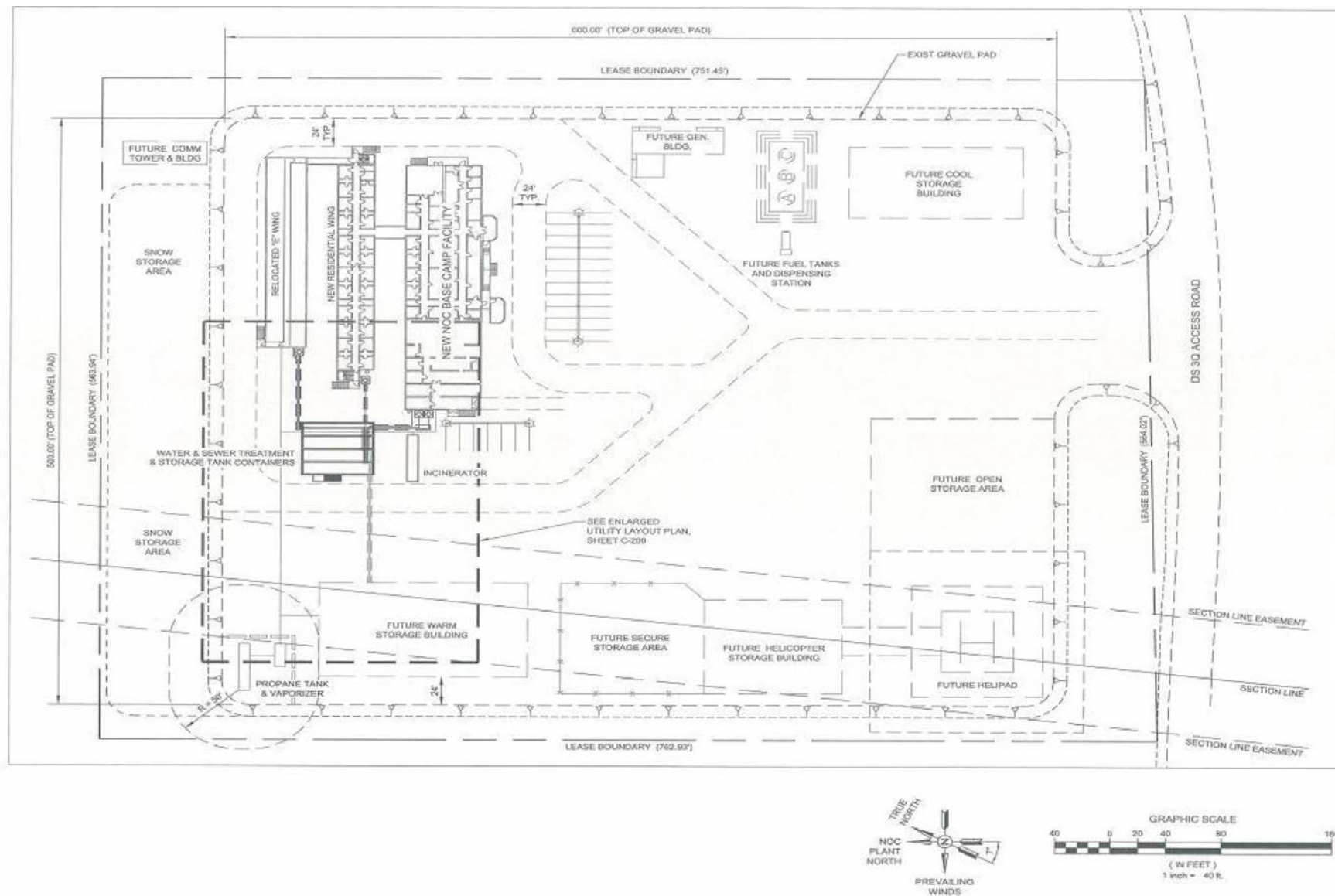
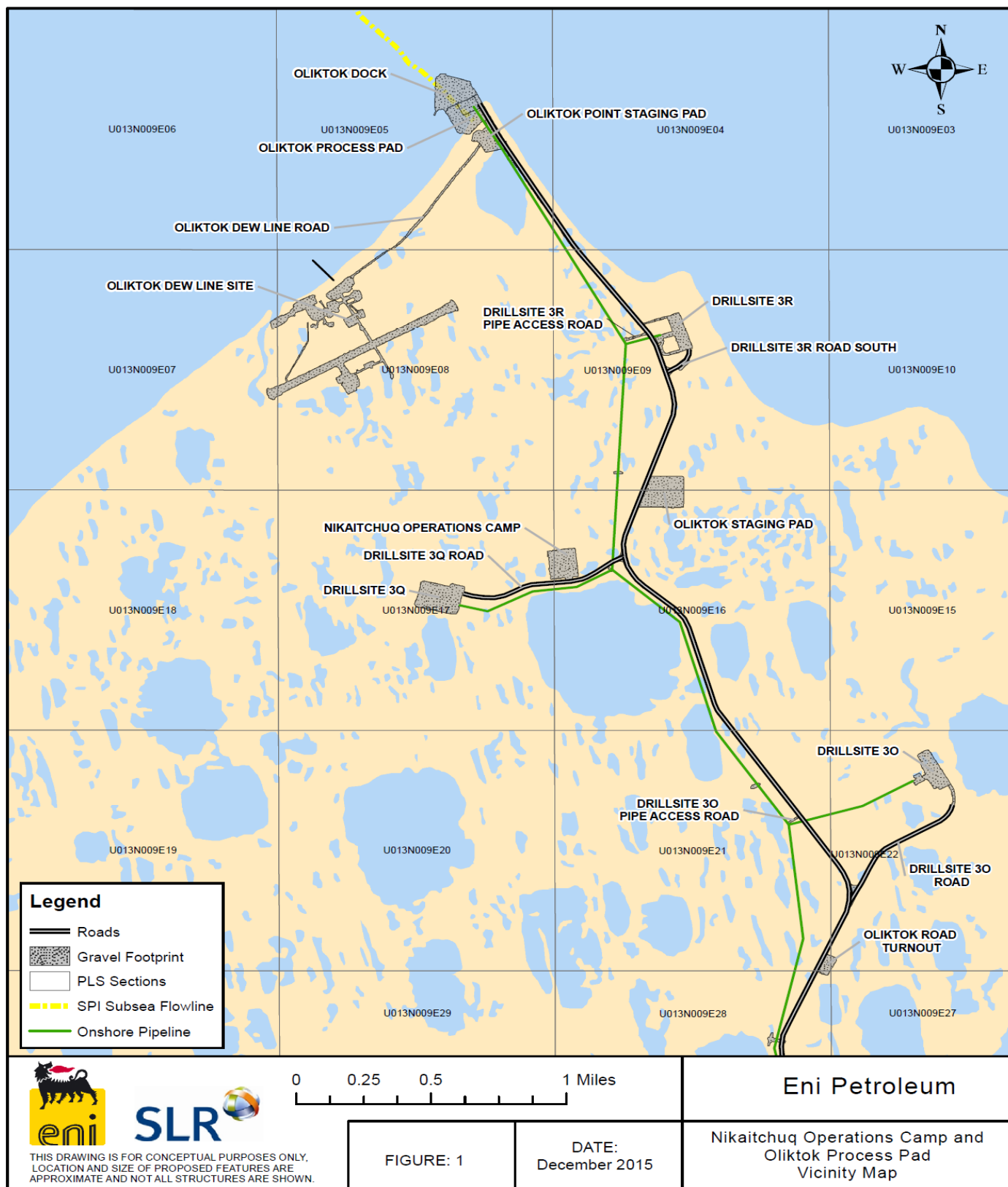


Figure 4. Nikaitchuq Operations Camp and Oliktok Process Pad Vicinity Map



Appendix C: Eni Local Policy (November 6, 2009)

ENI LOCAL POLICY

Nikaitchuq Working Times and Hours Policy for Employees and Contractors

November 6, 2009

POLICY NAME: "Eni Working Times and Hours Policy"

POLICY STATEMENT: It is important that all employees and contractor employees know and understand the work schedule that is expected of them. This policy is written with the goal of making clear the days and hours that employees and contractor employees are expected to work at Nikaitchuq.

The work schedule at Nikaitchuq varies depending on the activity that an employee or a contractor is performing. Generally speaking, Nikaitchuq will operate around the clock. Nikaitchuq drilling and construction activities will also be conducted on a 24-hour basis. The normal shift at Nikaitchuq is 12 hours on and 12 hours off. When employees or contractor employees are not working, they will reside at a camp provided by Eni Petroleum. Nikaitchuq camp facilities are for Eni Petroleum Employees and Contractor Employees on official business. No visitors that are not on official business may use Nikaitchuq camp facilities.

Camp facilities either may be local to Nikaitchuq or may be removed from the immediate vicinity of Nikaitchuq. Regardless as to the camp location, Eni employees or contractor employees can be required to work shifts in excess of 12 hours or be recalled to work during their off-shift time if emergencies or other special circumstances occur.

Section 13. Appendix D - ADEC Notification Form¹

Excess Emissions and Permit Deviation Reporting
State of Alaska Department of Environmental Conservation
Division of Air Quality

Stationary Source Name	Air Quality Permit No.

Company Name	Date

When did you discover the Excess Emissions/Permit Deviation?

Date: ____ / ____ / ____ Time: ____ : ____

When did the event/deviation occur?

Begin ____ / ____ / ____ Time: ____ : ____ (Use 24-hr clock.)

Date:

End Date: ____ / ____ / ____ Time: ____ : ____ (Use 24-hr clock.)

What was the duration of the event/deviation? ____ : ____ (hrs:min) days
or ____

(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

Reason for Notification: (please check only 1 box and go to the corresponding section)

- ☐ Excess Emissions – Complete Section 1 and Certify
- ☐ Deviation from Permit Condition – Complete Section 2 and Certify
- ☐ Deviations from COBC, CO, or Settlement Agreement – Complete Section 2 and Certify

Section 1. Excess Emissions

(a) Was the exceedance: ☐ Intermittent or ☐ Continuous

(b) Cause of Event (Check one that applies):

☐ Start Up/Shut Down	☐ Natural Cause (weather/earthquake/flood)
☐ Control Equipment Failure	☐ Schedule Maintenance/Equipment Adjustment
☐ Bad Fuel/Coal/Gas	☐ Upset Condition ☐ Other _____

(c) Description

Describe briefly, what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

(d) Emissions Units Involved:

Identify the emission unit involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

¹ Revised as of September 27, 2010

EU ID	EU Name	Permit Condition Exceeded/Limit/Potential Exceedance

(e) Type of Incident (please check only one):

- ☐ Opacity _____ % ☐ Venting _____ gas/scf ☐ Control Equipment Down
☐ Fugitive Emissions ☐ Emission Limit Exceeded ☐ Other _____
☐ Marine Vessel Opacity ☐ Flaring _____

(f) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable? ☐ Yes ☐ No

Do you intend to assert the affirmative defense of 18 AAC 50.235? ☐ Yes ☐ No

Certify Report (Go to end of form.)

Section 2. Permit Deviations

(a) Permit Deviation Type (check only one box, corresponding with the section in the permit):

- ☐ Emission Unit-Specific ☐ Generally Applicable Requirements
☐ Failure to Monitor/Report ☐ Reporting/Monitoring for Diesel Engines
☐ General Source Test/Monitoring Requirements ☐ Recordkeeping Failure
☐ Recordkeeping/Reporting/Compliance Certification ☐ Insignificant Emission Unit
☐ Standard Conditions Not Included in the Permit ☐ Stationary Source Wide
☐ Other Section: _____ (Title of section and section number of your permit).

(b) Emission Unit Involved:

Identify the emission unit involved in the event, using the same identification number and name as in the permit. List the corresponding permit conditions and the deviation.

EU ID	EU Name	Permit Condition/ Potential Deviation

(c) Description of Potential Deviation:

Describe briefly, what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) Corrective Actions:

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: _____ Title: _____ Date: _____

Signature: _____ Phone Number: _____

NOTE: *This document must be certified in accordance with 18 AAC 50.345(j)*

To submit this report:

1. Fax this form to: 907-451-2187

Or

2. Email to: DEC.AQ.Airreports@alaska.gov
if faxed or emailed,

Or

3. Mail to: ADEC
Air Permits Program
610 University Avenue
Fairbanks, AK 99709-3643

Or

4. Phone notifications: 907-451-5173
Phone notifications require written follow up report.

Or

5. Submission of information contained in this report can be made electronically at the following website:

<http://dec.alaska.gov/Applications/Air/airtoolsweb/Home/Index>

If submitted online, report must be submitted by an authorized E-Signer for the stationary source.

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY OPERATING PERMIT

Permit No. AQ0923TVP02

Issue Date: January 22, 2020

Expiration Date: January 22, 2025

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **Eni US Operating Co. Inc.**, for the operation of the **Nikaitsuq Development**.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As set out in AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating permit.

All stationary source-specific terms and conditions of Minor Permit No. AQ0923MSS11 have been incorporated into this permit.

Citations listed herein are contained within the effective version of 18 AAC 50 at permit issuance. All federal regulation citations are from those sections adopted by reference in this version of regulation in 18 AAC 50.040 unless otherwise specified.

Upon effective date of this permit, Operating Permit No. AQ0923TVP01 Revision 3 expires.

This Operating Permit becomes effective February 21, 2020.



James R. Plosay, Manager
Air Permits Program

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Abbreviations and Acronyms

AAC.....	Alaska Administrative Code	m	meters
AAQS	Ambient Air Quality Standard	MACT	Maximum Achievable Control Technology [as defined in 40 C.F.R. 63]
ADEC	Alaska Department of Environmental Conservation	MMBtu/hr	Million British thermal units per hour
AS	Alaska Statutes	MMscf.....	Million standard cubic feet
ASTM.....	American Society for Testing and Materials	MR&R.....	Monitoring, Recordkeeping, and Reporting
BACT	Best Available Control Technology	MW	Megawatts
bHp	Brake Horsepower	N/A.....	Not Applicable or Not Available
C.F.R.....	Code of Federal Regulations	NAICS.....	North American Industrial Classification System
CI.....	compression ignition	NESHAPs	Federal National Emission Standards for Hazardous Air Pollutants [NESHAPs as contained in 40 C.F.R. 61 and 63]
CAA or The Act.....	Clean Air Act	ng/J.....	nanograms per Joule
CMS.....	Continuous Monitoring System	NH ₃	ammonia
CO	Carbon Monoxide	NMHC.....	non-methane hydrocarbons
CO ₂	carbon dioxide	NO _x	Nitrogen Oxides
CO ₂ e	CO ₂ -equivalent	NRE	non-road engine
CISWI.....	Commercial and industrial solid waste incineration	NSPS	Federal New Source Performance Standards [NSPS as contained in 40 C.F.R. 60]
DDR.....	Doyon Drilling Rig	NWS.....	National Weather Service
Department	Alaska Department of Environmental Conservation	O & M	Operation and Maintenance
dscf	Dry standard cubic foot	O ₂	oxygen
EEMSP	excess emissions and monitoring systems performance report	ORL	Owner Requested Limit
EPA	US Environmental Protection Agency	PAL.....	Plantwide Applicability Limitation
EU.....	Emissions Unit	Pb	lead
EU ID.....	Emissions Unit Identification Number	PM.....	Particulate Matter
GAPCP	Good Air Pollution Control Practice	PM _{2.5}	particulate matter less than or equal to a nominal 2.5 microns in diameter
GDF	gasoline dispensing facility	PM-10	Particulate Matter less than or equal to a nominal ten microns in diameter
g/Hp-hr	grams per horsepower-hour	ppm	Parts per million
gr/dscf	grain per dry standard cubic foot (1 pound = 7000 grains)	ppmv, ppmvd	Parts per million by volume on a dry basis
GPH	gallons per hour	ppmw	parts per million by weight
H ₂ S.....	hydrogen sulfide	psia	Pounds per Square Inch (absolute)
HAPs.....	Hazardous Air Pollutants [as defined in AS 46.14.990]	PSD	Prevention of Significant Deterioration
HMI	Hospital and Medical/Infectious	PTE	Potential to Emit
HMIWI	Hospital and Medical/Infectious Waste Incineration	RICE	Reciprocating Internal Combustion Engine
Hp	horsepower	SIC.	Standard Industrial Classification
ICE.....	internal combustion engine	SIP.....	State Implementation Plan
J	joule	SN	Serial Number
kPa	kiloPascals	SO ₂	Sulfur dioxide
kW	Kilowatts	SPC	Standard Permit Condition or Standard Operating Permit Condition
LAER.....	Lowest Achievable Emission Rate		
lb.....	pounds		
lb/min.....	pounds per minute		

TBD To be determined

TPH Tons per hour

TPY Tons per year

ULSD.....ultra low sulfur diesel

VOC.....volatile organic compound [as defined in
40 C.F.R. 51.100(s)]

VOL volatile organic liquid [defined in 40
C.F.R. 60.111b, Subpart Kb]

vol% volume percent

wt% weight percent

WHRU waste heat recovery unit

Section 1. Stationary Source Information

Identification

Permittee:	Eni US Operating Co. Inc. 3800 Centerpoint Drive, Suite 300 Anchorage, Alaska 99503	
Stationary Source Name:	Nikaichuq Development	
Location:	70° 30' 36.87" North; 149° 52' 0.65" West	
Physical Address:	Oliktok Point 200 feet southeast of Kuparuk River Unit Seawater Treatment Plant	
Owner:	Eni US Operating Co. Inc. 3800 Centerpoint Drive, Suite 300 Anchorage, Alaska 99503	
Operator:	Eni US Operating Co. Inc. 3800 Centerpoint Drive, Suite 300 Anchorage, Alaska 99503	
Permittee's Responsible Officials:	Whitney Grande, Vice President Safety, Environment & Quality Stephanie Rupert, Production Manager 3800 Centerpoint Drive, Suite 300 Anchorage, Alaska 99503 (907) 865- 3300	
Designated Agent:	Capitol Corporate Services Inc. 4318 Conifer Lane. Juneau, AK 99801	
Stationary Source and Building Contact:	Larry Burgess, Manager, SEQ – Alaska 3800 Centerpoint Drive, Suite 300 Anchorage, Alaska 99503 (907) 865-3300; larry.burgess@eni.com	
Fee Contact:	Attn: Accounts Payable Department 3800 Centerpoint Drive, Suite 300 Anchorage, Alaska 99503 (907) 865-3300; akaccounts payable@eni.com	
Permit Contact:	Larry Burgess, Manager, SEQ – AK 3800 Centerpoint Drive, Suite 300 Anchorage, Alaska 99503 (907) 865- 3300; larry.burgess@eni.com	
Process Description:	SIC Code:	1311 – Crude Petroleum and Natural Gas
	NAICS Code:	211111 – Crude Petroleum and Natural Gas Extraction

[18 AAC 50.040(j)(3) & 50.326(a)]
[40 C.F.R. 71.5(c)(1) & (2)]

Section 2. Emissions Unit Inventory and Description

Emissions units listed in Table A have specific monitoring, recordkeeping, or reporting conditions in this permit. Unless noted elsewhere in the permit, emissions unit descriptions and ratings are given for identification purposes only.

Table A - Emissions Unit Inventory

EU ID	Emissions Unit Name	Emissions Unit Description	Rating/Size	Fuel	Construction / Installation Date
Oliktok Production Pad⁵					
1 ¹	Gas Turbine #1	Solar Taurus 70	8,250 kW ²	Fuel Gas	2010
2 ¹	Gas Turbine #2	Solar Taurus 70	8,250 kW ²	Fuel Gas	2011
32 ¹	Dual Fuel Turbine #3	Solar Taurus 70	8,250 kW ²	Fuel Gas	2010
		Solar Taurus 70	7,700 kW ²	Diesel	
33 ¹	Gas Turbine #4	Solar Taurus 70	8,250 kW ²	Fuel Gas	2010
3	Standby Generator - Reciprocating Engine	Detroit Diesel T1638A36 SN 5272003454	2,500 kW	Diesel	2009/Dec 2010
4	Daily Pilot & Purge Operation	Process Safety Flare	0.36 MMscf/day	Fuel Gas	2010
	Low Pressure Emergency Operation ³		7 MMscf/day	Fuel Gas	
69	OPP WIF Boiler #1	Weil-McLain 780 SN CP5859602	0.935 MMBtu/hr	Diesel	Unknown/ May 2010
70	OPP WIF Boiler #2	Weil-McLain 780 SN CP5808338	0.935 MMBtu/hr	Diesel	Unknown/ May 2010
71	OPP WIF Boiler #3	Weil-McLain 780 SN CP5808337	0.935 MMBtu/hr	Diesel	Unknown/ May 2010
78	Construction Power Generator #1 (NRE)	Caterpillar 3616C (Rotate on/off site)	2,763 bHp	Diesel	Unknown
106	Standby Heater/ Boiler	Newpoint Thermal 7129 SN PFU08-Z-55420	10.5 MMBtu/hr	Fuel Gas	2010/Nov 2011
Nikaitech Operations Center⁵					
93	Standby Generator Reciprocating Engine	Detroit Diesel R1638A36 SN 536104761	1,495 hp	Diesel	2009/ April 2011
94	NOC Camp Boiler #1	Fulton Reliance SN 801005957	2.0 MMBtu/hr	Propane	Unknown/ January 2011
95	NOC Camp Boiler #2	Fulton Reliance SN 801005958	2.0 MMBtu/hr	Propane	Unknown/ January 2011
97	Construction Power Generator #2 (NRE)	CAT C-32	1,381 bHp	Diesel	Unknown
111	NOC Warm Storage Boiler #1	Weil-McLain 780 SN CP6255198	0.935 MMBtu/hr	Propane	Unknown/ January 2011
112	NOC Warm Storage Boiler #2	Weil-McLain 780 SN CP6041726	0.935 MMBtu/hr	Propane	Unknown/ January 2011
118 ⁴	Gasoline Storage Tank	Gasoline dispensing facility	12,000 gallons	N/A	2013

EU ID	Emissions Unit Name	Emissions Unit Description	Rating/Size	Fuel	Construction / Installation Date
Spy Island Drillsite⁵					
47	Standby Generator E04 - Reciprocating Engine	MTU 16V 4000 G83 SN MHB00342	3,351 bHp	Diesel	2010/ April 2012
49	Standby Generator E07- Reciprocating Engine	Caterpillar 3516C SN SBK01163	3,635 bHp	Diesel	8/31/2006/ 10/14/2011
50	Fire Water Pump	John Deere 6068HFC28C SN PE6068L154228	183 bHp	Diesel	2010/2011
96	Multiple chamber Incinerator	Pennram ESS C-300	300 lb/hr	Waste/Diesel	3/23/2010/ 11/09/2011
107	Tent Heating Boiler #1	Burnham V1110-WO SN 65231895	2.43 MMBtu/hr	Diesel	Unknown/ Sept 2011
108	Tent Heating Boiler #2	Burnham V1110-WO SN 65098973	2.43 MMBtu/hr	Diesel	Unknown/ Oct 2011
109	WIF Boiler #1	Burnham FD-38 SN 65211841	1.73 MMBtu/hr	Diesel	Aug 2010/ Sept 2011
110	WIF Boiler #2	Burnham FD-38 SN 65211842	1.73 MMBtu/hr	Diesel	Aug 2010/ Sept 2011
114	Mud Tank Farm Boiler #2	Burnham FD-14 SN 65147826	0.65 MMBtu/hr	Diesel	Unknown/ March 2011
115	Mud Tank Farm Boiler #1	Burnham FD-14 SN 65231894	0.65 MMBtu/hr	Diesel	Unknown/ March 2011
64	WIF Generator Reciprocating Engine	John Deere 6090HF485 SN RG6090L078257	422 bHp	Diesel	March 2010/ 2011
68	Cement Pump Engine #1	Detroit Diesel 8V-71N SN 8FV4919	320 bHp	Diesel	1980/ Sept 2011
116	Cement Pump Engine #2	Detroit Diesel 8V-71N SN 8FV4791	320 bHp	Diesel	1980/ Sept 2011
123	Construction Well Test Flare ⁶	Test Flare - Pilot, Purge, and Process Gas	3 MMscf/day	Fuel Gas	TBD
On-Shore Development Drilling Rig (Nabors 245E Drilling Rig)					
9	Rig Boiler #1	Cleaver Brooks CB100-100	4.2 MMBtu/hr	Diesel	N/A
10	Rig Boiler #2	Cleaver Brooks CB100-100	4.2 MMBtu/hr	Diesel	N/A
11	Rig Heater #1	Tioga 1DF-21B0	4.2 MMBtu/hr	Diesel	N/A
12	Rig Heater #2	Tioga 1DF-21B0	4.2 MMBtu/hr	Diesel	N/A
13	Rig Heater #3	Tioga 1DF-11C0	2.5 MMBtu/hr	Diesel	N/A
14	Rig Engine #1 (NRE)	Caterpillar D399	1,128 bHp	Diesel	N/A
15	Rig Engine #2 (NRE)	Caterpillar D399	1,128 bHp	Diesel	N/A
16	Rig Engine #3 (NRE)	Caterpillar D399	1,128 bHp	Diesel	N/A
17	Rig Engine #4 (NRE)	Caterpillar D399	1,128 bHp	Diesel	N/A
18	Coldstart Motors (NRE)	Caterpillar D353	233 bHp	Diesel	N/A
74	Reciprocating Engine #1 (NRE)	Cummins	303 bHp	Diesel	N/A

EU ID	Emissions Unit Name	Emissions Unit Description	Rating/Size	Fuel	Construction / Installation Date
75	Reciprocating Engine #2 (NRE)	Cummins	303 bHp	Diesel	N/A
Off-Shore Development Drilling Rig (Doyon Drilling Rig (DDR))					
98	Rig Boiler #1	Superior Boiler	4.184 MMBtu/hr	Diesel	N/A
99	Rig Boiler #2	Superior Boiler	4.184 MMBtu/hr	Diesel	N/A
100	Rig Heater #1	Dick's Air Heater	3.5 MMBtu/hr	Diesel	N/A
101	Rig Heater #2	Dick's Air Heater	5.0 MMBtu/hr	Diesel	N/A
102	Reciprocating Engine #1 (NRE)	Caterpillar 3516	2,523 bHp	Diesel	N/A
103	Reciprocating Engine #2 (NRE)	Caterpillar 3516	2,523 bHp	Diesel	N/A
104	Reciprocating Engine #3 (NRE)	Caterpillar 3516	2,523 bHp	Diesel	N/A
105	Reciprocating Engine #4 (NRE)	Caterpillar 3512	1,879 bHp	Diesel	N/A
117	Mud Pump #3 Coldstart (NRE)	DEUTZ AG	63 bHp	Diesel	N/A
124	Reciprocating Engine #5 (NRE)	Caterpillar 3516B	2,150 bHp	Diesel	N/A
125	Reciprocating Engine #6 (NRE)	Caterpillar 3516C	2,722 bHp	Diesel	N/A
19	Peak Crane Engine (NRE)	Nonroad crane engine	500 tons, 650 bHp	Diesel	N/A
20	Manitowoc Crane Engine (NRE)	Nonroad crane engine	300 tons, 575 bHp	Diesel	N/A
23	Hot Oiler Boiler/Heater #1	Heater	6 MMBtu/hr	Diesel	N/A
24	Hot Oiler Boiler/Heater #2	Heater	9.5 MMBtu/hr	Diesel	N/A
Partial List of Intermittent Well Servicing Equipment (Workover Rig)⁷					
19	Peak Crane Engine (NRE)	Nonroad crane engine	500 tons, 650 bHp	Diesel	N/A
20	Manitowoc Crane Engine (NRE)	Nonroad crane engine	300 tons, 575 bHp	Diesel	N/A
23	Hot Oiler Boiler/Heater #1	Heater	6 MMBtu/hr	Diesel	N/A
24	Hot Oiler Boiler/Heater #2	Heater	9.5 MMBtu/hr	Diesel	N/A

Notes:

1. The Permittee may install Waste Heat Recovery Units (WHRU) on the Gas Turbines (EU IDs 1, 2, 32, and 33) to provide process and space heat. The WHRU shall not include supplemental burners.
2. The turbine ratings are based on 100 percent load and 0 degrees F inlet air temperature.
3. EU ID 4, emergency flare operation, is rated at 50 MMscf/day for high pressure operation.

4. EU ID 118 includes any cargo tank during delivery to the storage tank, and equipment as described in 40 C.F.R. 63.11112(a).
5. All engines are stationary unless noted as nonroad engines (NREs).
6. Emissions from the Construction Well Test Flare (EU ID 123) are associated with ‘temporary construction activities’ and are not included when determining stationary source classification under this permit action.
7. In all cases, intermittent well servicing equipment must be portable and operated on a periodic and temporary basis in a manner consistent with the nonroad engine rule adopted by reference in 18 AAC 50.100.

[18 AAC 50.326(a)]

[40 C.F.R. 71.5(c)(3)]

[Tables 2, 3, & 4, Minor Permit AQ0923MSS11, June 12, 2017]

Section 3. State Requirements

Visible Emissions Standards

- 1. Incinerators and Fuel-Burning Equipment Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from all emissions units, except for the nonroad engines (NREs) and the gasoline dispensing facility (EU ID 118), listed in Table A to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.040(j), 50.050(a), 50.055(a)(1), &50.326(j)]
[40 C.F.R. 71.6(a)(1)]

- 1.1. For the fuel gas- and propane-fired engines, turbines, boilers, and heaters, EU IDs 1, 2, 33, 94, 95, 106, 111, and 112 listed in Table A burn only propane or fuel gas as fuel. Monitoring for these emissions units shall consist of a statement in each operating report under Condition 95 indicating whether each of these emissions units fired only gas during the period covered by the report. Report under Condition 94 if any fuel other than fuel gas or propane is burned.
- 1.2. For each of EU IDs 69 through 71, 109, 110, 114, and 115 (emissions units with potential emissions that are insignificant based on unrestricted operations but are significant per 18 AAC 50.326(d)(1)) listed in Table A, monitoring shall consist of an annual compliance certification under Condition 96 for the visible emissions standard based on reasonable inquiry.
- 1.3. For EU IDs 23 and 24 (workover rig heaters) and EU ID 50 (fire water pump) listed in Table A (emissions units that are significant per 18 AAC 50.326(d)(1) but are otherwise insignificant based on historical actual emissions per 18 AAC 50.326(e)), as long as the emissions units do not exceed the corresponding operational limits in Table C and Condition 26.2, monitoring shall consist of an annual compliance certification under Condition 96 for the visible emissions standard based on reasonable inquiry. Otherwise, monitor, record, and report in accordance with Conditions 2 through 4 for the remainder of the permit term.
- 1.4. For the liquid fuel-fired engines, turbines, boilers, and heaters, EU IDs 3, 47, 49, 64, 68, 93, 107, 108, and 116, EU IDs 9 through 13 (On-Shore Development Drilling Rig equipment), and EU IDs 98 through 101 (Off-Shore Development Drilling Rig equipment) listed Table A, monitor, record and report in accordance with Conditions 2 through 4.
- 1.5. For the dual fuel-fired turbine, EU ID 32, burn gas as the primary fuel. Monitoring for this emissions unit shall consist of a statement in each operating report required under Condition 95 indicating whether the emissions unit burned gas as the primary fuel during the period covered by the report. If the emissions unit operated on a back-up liquid fuel during the period covered by the report, the Permittee shall monitor, record, and report in accordance with Conditions 14.
- 1.6. For the flares, EU IDs 4 and 123, monitor, record and report in accordance with Condition 5.

- 1.7. For the incinerator, EU ID 96, monitor, record and report in accordance with Condition 6.

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)]

Visible Emissions Monitoring, Recordkeeping and Reporting (MR&R)

Liquid Fuel-Fired Emissions units

2. **Visible Emissions Monitoring.** When required by Conditions 1.3 or 1.4, the Permittee shall observe the exhaust of EU IDs 3, 9 through 13, 23, 24, 47, 49, 50, 64, 68, 93, 98 through 101, 107, 108, and 116 for visible emissions using the Method 9 Plan under Condition 2.4 or the Smoke/No-Smoke Plan under Condition 2.5.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(i)]

- 2.1. In the event of replacement¹ of any of EU IDs 3, 9 through 13, 23, 24, 47, 49, 50, 64, 68, 93, 98 through 101, 107, 108, and 116, the Permittee shall observe the exhaust of the newly installed emissions unit(s) using either the Method 9 Plan under Condition 2.4 or the Smoke/No-Smoke Plan under Condition 2.5.
- 2.2. The Permittee may change visible emissions plan for an emissions unit at any time unless prohibited from doing so by Condition 2.6.
- 2.3. The Permittee may for each unit, elect to continue the visible emissions monitoring schedule in effect from the previous permit at the time a renewed permit is issued, if applicable.
- 2.4. **Method 9 Plan.** For all observations in this plan, observe emissions unit exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.²
- a. First Method 9 Observation. Except as provided in Condition 2.3 or Condition 2.6.c(ii), observe the exhausts of EU IDs 3, 9 through 13, 23, 24, 47, 49, 50, 64, 68, 93, 98 through 101, 107, 108, and 116 for 18 minutes within six months after the issue date of this permit.
- (i) For any emissions unit, observe emissions unit exhaust within 14 calendar days after changing from the Smoke/No-Smoke Plan of Condition 2.5.
- (ii) For any emissions unit replaced during the term of this permit, observe exhaust of the replacement unit within 30 days of initial startup.
- (iii) For any emissions unit with intermittent operations, observe exhaust within 30 days of restart.

¹ "Replacement," as defined in 40 C.F.R. 51.166(b)(32).

² Visible emissions observations are not required during emergency operations.

- b. Monthly Method 9 Observations. After the first Method 9 observation conducted under Condition 2.4.a, perform 18-minute observations at least once in each calendar month that an emissions unit operates.
 - c. Semiannual Method 9 Observations. After observing emissions for three consecutive operating months under Condition 2.4.b, unless a six-minute average is greater than 15 percent and one or more observations are greater than 20 percent, perform 18-minute observations:
 - (i) within six months after the preceding observation, or
 - (ii) for an emissions unit with intermittent operations, during the next scheduled operation immediately following six months after the preceding observation.
 - d. Annual Method 9 Observations. After at least two semiannual 18-minute observations, unless a six-minute average is greater than 15 percent and one or more individual observations are greater than 20 percent, perform 18-minute observations:
 - (i) within twelve months after the preceding observation; or
 - (ii) for an emissions unit with intermittent operations, during the next scheduled operation immediately following twelve months after the preceding observation.
 - e. Increased Method 9 Frequency. If a six-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more observations are greater than 20 percent, then increase or maintain the 18-minute observation frequency for that emissions unit to at least monthly intervals as described in Condition 2.4.b, until the criteria in Condition 2.4.c for semiannual monitoring are met.
- 2.5. **Smoke/No Smoke Plan.** Observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor.
- a. Initial Monitoring Frequency. Observe the exhaust during each calendar day that an emissions unit operates.
 - b. Reduced Monitoring Frequency. If the emissions unit operated without visible smoke in the exhaust for those 30 consecutive operating days, observe emissions unit exhaust at least once in every calendar month that the emissions unit operates.
 - c. Smoke Observed. If visible emissions are observed, comply with Condition 2.6.
- 2.6. **Corrective Actions Based on Smoke/No Smoke Observations.** If visible emissions are present in the emissions unit exhaust during an observation performed under the Smoke/No Smoke Plan of Condition 2.5, then the Permittee shall either follow the Method 9 plan of Condition 2.4 or

- a. initiate actions to eliminate visible emissions from the emissions unit within 24 hours of the observation;
- b. keep a written record of the starting date, the completion date, and a description of the actions taken to reduce visible emissions; and
- c. after completing the actions required under Condition 2.6.a,
 - (i) conduct Smoke/No Smoke observations in accordance with Condition 2.5.
 - (A) at least once per day for the next seven operating days and, as applicable, until the initial 30 day observation period is completed; and
 - (B) continue as described in Condition 2.5.b; or
 - (ii) if the actions taken under Condition 2.6.a do not eliminate the visible emissions, or if subsequent visible emissions is observed under the schedule of Condition 2.6.c(i)(A), then observe the emissions unit exhaust using the Method 9 Plan unless the Department gives written approval to resume observations under the Smoke/No Smoke Plan. After observing visible emissions and making observations under the Method 9 Plan, the Permittee may at any time take corrective action that eliminates smoke and restart the Smoke/No Smoke Plan under Condition 2.5.a.

3. Visible Emissions Recordkeeping. The Permittee shall keep records as follows:

[18 AAC 50.040(j)(4); 50.326(j)(3), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(ii)]

3.1. When using the Method 9 Plan of Condition 2.4,

- a. the observer shall record
 - (i) the name of the stationary source, emissions unit and location, emissions unit type, observer's name and affiliation, and the date on the Visible Emissions Observation Form in Section 12;
 - (ii) the time, estimated distance to the emissions location, sun location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating mode (load or fuel consumption rate or best estimate if unknown) on the sheet at the time opacity observations are initiated and completed;
 - (iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;
 - (iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation Form in Section 12; and

- (v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.
 - b. To determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet.
 - c. Calculate and record the highest six-consecutive- and 18-consecutive-minute average opacities observed.
- 3.2. If using the Smoke/No Smoke Plan of Condition 2.5, record the following information in a written log for each observation and submit copies of the recorded information upon request of the Department:
 - a. the date and time of the observation;
 - b. the EU ID of the emissions unit observed;
 - c. whether visible emissions are present or absent in the emissions unit exhaust;
 - d. a description of the background to the exhaust during the observation;
 - e. if the emissions unit starts operation on the day of the observation, the startup time of the emissions unit;
 - f. name and title of the person making the observation; and
 - g. operating mode (load or fuel consumption rate or best estimate, if unknown).
- 3.3. The records may be kept in electronic format.
- 4. Visible Emissions Reporting.** The Permittee shall report visible emissions as follows:

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(iii)]
- 4.1. Include in each operating report under Condition 95, for the period covered by the report:
 - a. which visible-emissions plan of Condition 2 was used for each emissions unit; if more than one plan was used, give the time periods covered by each plan;
 - b. for all Method 9 Plan observations,
 - (i) copies of the observation results (i.e. opacity observations) for each emissions unit that used the Method 9 Plan, except for the observations the Permittee has already supplied to the Department; and
 - (ii) a summary to include:
 - (A) number of days observations were made;

- (B) highest six-consecutive and 18-consecutive-minute average opacities observed; and
 - (C) dates when one or more observed six-consecutive-minute average opacities were greater than 20 percent;
 - c. for each emissions unit under the Smoke/No Smoke Plan, the number of days that smoke/no smoke observations were made and which days, if any, that visible emissions were observed; and
 - d. a summary of any monitoring or recordkeeping required under Conditions 2 and 3 that was not done.
- 4.2. Report under Condition 94:
- a. the results of Method 9 observations that exceed an average of 20 percent opacity for any six-consecutive-minute period; and
 - b. if any monitoring under Condition 2 or 6 was not performed when required, report within three days of the date the monitoring was required.

Flares

5. **Visible Emissions MR&R.** For EU IDs 4 and 123, the Permittee shall observe one daylight flare event³ within 12 months of the preceding flare event observation. If no daylight flare event occurs within that 12-month period, then the Permittee shall observe the next daylight flare event.
- 5.1. Monitor flare events using Method 9, for at least 18 consecutive minutes.
- 5.2. Record the following information for observed events:
- a. the flare(s) EU ID number;
 - b. results of the Method 9 observations;
 - c. reason(s) for flaring;
 - d. date, beginning and ending time of event; and
 - e. volume of gas flared.
- 5.3. Monitoring of a flare event may be postponed for safety or weather reasons, or because a qualified observer is not available. If monitoring of a flare event is postponed for any of the reasons described in this condition, the Permittee shall include in the next operating report required by Condition 95, an explanation of the reason the event was not monitored.
- 5.4. The records required by Condition 5.2 may be kept in electronic format.

³ For purposes of this permit, a “flare event” is flaring of gas at a rate that exceeds the source’s de-minimis pilot, purge, and assists gas rates for a minimum of 18 consecutive minutes. It does not include non-scheduled release operations, i.e. process upsets, emergency flaring, or de-minimis venting of gas incidental to normal operations.

- 5.5. Attach copies of the records required by Condition 5.2 with the operating report required by Condition 95 for the period covered by that report.
- 5.6. Report under Condition 94 whenever the opacity standard in Condition 1 is exceeded.
[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(i) - (iii)]

Incinerators

6. Incinerator Visible Emissions MR&R. The Permittee shall observe emissions from EU ID 96 for 18 consecutive minutes to obtain a minimum of 72 observations in accordance with Method 9 of 40 C.F.R. 60, Appendix A, as follows:

- 6.1. The Permittee may elect to continue the visible emissions monitoring schedule in effect from a previous permit; or
- 6.2. Conduct Method 9 observations at least once every three calendar months after the effective date of this permit during which the incinerator operates; and
- 6.3. After two years, subsequent observations may be reduced to an annual observation if the three-month observations in Condition 6.1 do not exceed the visible emissions standard in Condition 1.
- 6.4. If the most recent set of observations shows a six-consecutive-minute average opacity to be greater than 15 percent and one or more observations are greater than 20 percent, the Permittee shall comply with the following:
 - a. Make repairs and increase the Method 9 observation frequency to at least once per calendar month during which the incinerator operates; and
 - b. After three consecutive calendar months of Method 9 observations under Condition 6.4.a without exceeding the criteria in Condition 6.4, the Permittee shall continue with the annual observation frequency described in Condition 6.3.
- 6.5. Record and report as described in Conditions 3 through 4, as applicable to Method 9 observations.

[18 AAC 50.040(j)(4) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]

Particulate Matter (PM) Emissions Standards

7. Fuel-Burning Equipment PM. The Permittee shall not cause or allow particulate matter (PM) emitted from all emissions units, except for the nonroad engines (NREs), the gasoline dispensing facility (EU ID 118), and the incinerator (EU ID 96), listed in Table A to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.040(j), 50.055(b)(1) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

- 7.1. For the fuel-gas- and propane-fired engines, turbines, boilers, and heaters, EU IDs 1, 2, 33, 94, 95, 106, 111, and 112 listed in Table A, burn only propane or fuel gas as fuel. Monitoring for these emissions units shall consist of a statement in each

operating report under Condition 95 indicating whether each of these emissions units fired only gas during the period covered by the report. Report under Condition 94 if any fuel other than gas or propane is burned.

- 7.2. For each of EU IDs 69 through 71, 109, 110, 114, and 115 (emissions units with potential emissions that are insignificant based on unrestricted operations but are significant per 18 AAC 50.326(d)(1)) listed in Table A, monitoring shall consist of an annual compliance certification under Condition 96 for the PM standard based on reasonable inquiry.
- 7.3. For EU IDs 23 and 24 (workover rig heaters) and EU ID 50 (fire water pump) listed in Table A (emissions units that are significant per 18 AAC 50.326(d)(1) but are otherwise insignificant based on historical actual emissions per 18 AAC 50.326(e)), as long as the emissions units do not exceed the corresponding operational limits in Table C and Condition 26.2, monitoring shall consist of an annual compliance certification under Condition 96 for the PM emissions standard based on reasonable inquiry. Otherwise, monitor, record, and report in accordance with Conditions 8 through 10 (for EU ID 50) and Conditions 11 through 13 (for EU IDs 23 and 24) for the remainder of the permit term.
- 7.4. For the liquid fuel-fired engines and turbines, EU IDs 3, 47, 49, 64, 68, 93, and 116 listed in Table A, monitor, record and report in accordance with Conditions 8 through 10.
- 7.5. For the liquid fuel-fired boilers, and heaters, EU IDs 107 and 108, EU IDs 9 through 13 (On-Shore Development Drilling Rig), and EU IDs 98 through 101 (Off-Shore Development Drilling Rig) listed in Table A, monitor, record and report in accordance with Conditions 11 through 13.
- 7.6. For the dual fuel-fired turbine, EU ID 32, the Permittee shall comply with Condition 1.5.
- 7.7. For the flares, EU IDs 4 and 123, monitor, record and report in accordance with Condition 5.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)]

PM MR&R

Liquid Fuel-Fired Engines and Turbines

8. **PM Monitoring.** The Permittee shall conduct source tests on diesel engines EU IDs 3, 47, 49, 50 (if triggered per Condition 7.3), 64, 68, 93 and 116, and the dual fuel-fired turbine EU ID 32 (if required per Condition 14.3.a), to determine the concentration of PM in the exhaust of an emissions unit.

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(i)]

- 8.1. If any of EU IDs 3, 47, 49, 50 (if triggered per Condition 7.3), 64, 68, 93 and 116, and the dual fuel-fired turbine EU ID 32 (if required per Condition 14.3.a) exceeds

the criteria of Condition 8.2.a or 8.2.b, the Permittee shall, within six months of the exceedance, either

- a. except as exempted under Condition 8.4, conduct a PM source test according to requirements set out in Section 7; or
- b. make repairs and observe visible emissions as described in Condition 2.4 to show that emissions no longer exceed the criteria of Condition 8.2 under load conditions comparable to those when the criteria were exceeded.

8.2. Conduct the PM source test or make repairs according to Condition 8.1 if

- a. 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent; or
- b. for an emissions unit with an exhaust stack diameter that is less than 18 inches, 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity that is greater than 15 percent and not more than 20 percent, unless the Department has waived this requirement in writing.

8.3. During each one-hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the highest 18-minute average opacity measured during each one-hour test run. Submit a copy of these observations with the source test report.

8.4. The PM source test requirements in Conditions 8.1 and 8.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.

9. PM Recordkeeping. The Permittee shall keep records of the results of any source test and visible emissions observations conducted under Condition 8.

[18 AAC 50.040(j)(4) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(ii) & 71.6(c)(6)]

10. PM Reporting. The Permittee shall report as follows:

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(iii)]

10.1. Report under Condition 94

- a. the results of any PM source test that exceeds the PM emissions limit in Condition 7; or
- b. if one of the criteria of Condition 8.2 was exceeded and the Permittee did not comply on time with either Condition 8.1.a or Condition 8.1.b. Report the deviation within 24 hours of the date compliance with Condition 8.1 was required;

10.2. Notify the Department of any Method 9 observation results that are greater than the threshold of either Condition 8.2.a or Condition 8.2.b within 30 days of the end of the month in which the observations occurred. Include the dates, EU ID(s), and results

when an observed 18-minute average opacity was greater than an applicable threshold in Condition 8.2;

- 10.3. In each operating report under Condition 95, include for the period covered by the report:
- a summary of the results of any PM source test and visible emissions observation conducted under Condition 8; and
 - copies of any visible emissions observation results greater than the thresholds of Condition 8.2, if they were not already submitted.

For Liquid Fuel-Fired Boilers and Heaters

- 11. PM Monitoring.** The Permittee shall conduct source tests on EU IDs 9 through 13, EU IDs 23 and 24 (if triggered per Condition 7.3), EU IDs 98 through 101, 107, and 108 to determine the concentration of PM in the exhaust of each of the emissions units as follows:

[18 AAC 50.040(j), & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(i) & (c)(6)]

- 11.1. Except as exempted under Condition 11.3, conduct a PM source test according to the requirements in Section 7 no later than 90 calendar days after anytime corrective maintenance fails to eliminate visible emissions greater than the 20 percent average opacity threshold for two or more 18-consecutive-minute observations in a consecutive six-month period.
- 11.2. During each one-hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the highest 18-consecutive-minute average opacity that was measured during each one-hour test run. Submit a copy of these observations with the source test report.
- 11.3. The PM source test requirement in Condition 11 is waived for an emissions unit if:
- a source test on that unit has shown compliance with the PM standard during the permit term; or
 - corrective action was taken to reduce visible emissions and two consecutive 18-minute Method 9 visible emissions observations (as described in Condition 2.4) conducted thereafter within a six-month period show visible emissions less than the threshold in Condition 11.1.

- 12. PM Recordkeeping.** The Permittee shall keep records of the results of any PM testing and visible emissions observations conducted under Condition 11.

[18 AAC 50.040(j) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(ii) & (c)(6)]

- 13. PM Reporting.** The Permittee shall report as follows:

[18 AAC 50.040(j) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]

- 13.1. In each operating report required by Condition 95, include for the period covered by the report:

- a. the dates, EU ID(s), and results when an observed 18-minute opacity observation was greater than the threshold in Condition 11.1.
 - b. a summary of the results of any PM testing and visible emissions observations conducted under Condition 11.
- 13.2. Report as excess emissions, in accordance with Condition 94, any time the results of a source test for PM exceeds the PM emission limit stated in Condition 7.

Visible Emissions & PM MR&R for Dual Fuel-Burning Equipment

- 14.** The Permittee shall monitor, record and report the monthly hours of operation of EU ID 32 when operating on a back-up liquid fuel, as set out in Conditions 26.1.a through 26.1.d.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 C.F.R. 71.6(a)(3)(i) - (iii)]

- 14.1. If EU ID 32 does not exceed 600 hours of operations in any 12 consecutive months on a back-up liquid fuel, monitoring of compliance for visible emissions and PM shall consist of an annual compliance certification under Condition 96 based on reasonable inquiry.
- 14.2. For EU ID 32, notify the Department and begin monitoring in accordance with Condition 14.3 no later than 15 days after the end of a calendar month in which the cumulative hours of operation for a 12-consecutive-month period exceed 600 hours on a back-up liquid fuel, or during the next scheduled operation on back-up liquid fuel.
- 14.3. When required to do so by Condition 14.2, observe the emissions unit exhaust, following 40 C.F.R. 60, Appendix A-4 Method 9, for 18 minutes to obtain 72 consecutive 15-second opacity observations.
- a. If the observation exceeds the standard in Condition 1, monitor as described in Condition 8.
 - b. If the observation does not exceed the standard in Condition 1, no additional monitoring is required until the cumulative hours of operation exceed each subsequent 600-hour operation on back-up liquid fuel during a 12-consecutive-month period.⁴
- 14.4. Keep records and report in accordance with Conditions 3, 4, 9, and 10.
- 14.5. Report under Condition 94 if the Permittee fails to comply with any of Conditions 14.2, 14.3, and 14.4.

Sulfur Compound Emissions Standards and MR&R Requirements

- 15. Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from EU IDs 1 through 4, 9 through 13, 23, 24, 32, 33, 47, 49,

⁴ If the requirement to monitor is triggered more than once in a calendar month, only one Method 9 observation is required to be conducted by the stated deadline for that month.

50, 64, 68 through 71, 93 through 95, 98 through 101, 106 through 116, and 123, listed in Table A to exceed 500 ppm averaged over three hours.

[18 AAC 50.040(j), 50.055(c), & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

- 15.1. To ensure compliance with Condition 15, the Permittee shall comply with Condition with Condition 27.

[Condition 13, Minor Permit AQ0923MSS11, June 12, 2017]

Insignificant Emissions Units

16. For emissions units at the stationary source that are insignificant as defined in 18 AAC 50.326(d)-(i) that are not listed in this permit, the following apply:

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(b)(4)]
[40 C.F.R. 71.6(a)(1) & (3)]

- 16.1. **VE Standard.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment, or an incinerator to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.050(a) & 50.055(a)(1)]

- 16.2. **PM Standard.** The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1)]

- 16.3. **Sulfur Compound Standard.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c)]

- 16.4. **General MR&R for Insignificant Emissions Units.** The Permittee shall comply with the following:

- a. Submit the compliance certification of Condition 96 based on reasonable inquiry;
- b. Comply with the requirements of Condition 78;
- c. Report in the operating report required by Condition 95 if current actual emissions of an emissions unit that has historically been classified as insignificant because of actual emissions less than the thresholds of 18 AAC 50.326(e) and current actual emissions have become greater than any of those thresholds; and
- d. No other monitoring, recordkeeping or reporting is required for insignificant emissions units to demonstrate compliance with the emissions standards under Conditions 16.1, 16.2, and 16.3.

Section 4. Pre-Construction⁵ Permit Requirements

Operational Restrictions for Drilling Rigs and Well Servicing Equipment

- 17. Operation of Construction Well Test Flare, EU ID 123.** The Permittee shall notify the Department in accordance with Condition 92 upon startup of EU ID 123 and when it has been removed from the source.

[18 AAC 50.040(j) & 50.326(j)]

[40 C.F.R. 71.6(a)(1)]

[Condition 2, Minor Permit AQ0923MSS11, June 12, 2017]

- 18. Operation of Drilling Rigs.** The Permittee is authorized to operate the following two drilling rigs in accordance with the terms and conditions of this permit:

- 18.1. On-Shore Drilling Rig** consisting of EU IDs 9 through 18, 74, and 75 listed in Table A are collectively referred to as the “Nabors 245E Drilling Rig.” The Permittee shall comply with the following:

- a. Operate actual drilling rig similar to or smaller than the Nabors 245E Drilling Rig; and
- b. In all situations, operate boilers and heaters with cumulative rating not exceeding 19.3 MMBtu/hr and engines with cumulative rating not exceeding 5,400 bHp.

- 18.2. Off-Shore Development Drilling Rig** consisting of EU IDs 98 through 105, 117, 124, and 125 listed in Table A are collectively referred to as the “Doyon Drilling Rig (DDR).” The Permittee shall comply with the following:

- a. Operate actual drilling rig similar to or smaller than the DDR; and
- b. In all situations, operate boilers and heaters with cumulative rating not exceeding 16.9 MMBtu/hr and engines with cumulative rating not exceeding 14,500 bHp.

[18 AAC 50.040(j) & 50.326(j)]

[40 C.F.R. 71.6(a)(1)]

[Condition 3, Minor Permit AQ0923MSS11, June 12, 2017]

- 19. Operation of Intermittent Well Servicing Equipment.** The Permittee is authorized to periodically operate intermittent well servicing equipment listed in Table A, collectively called “Workover Rig,” in accordance with the terms and conditions of this permit. The Permittee shall comply with the following:

- 19.1. Operate actual Workover Rigs similar or smaller than the Workover Rig presented as EU IDs 19 through 24 in Table A;
- 19.2. In all situations, operate boilers and heaters with cumulative rating not exceeding 15.5 MMBtu/hr and engines with cumulative rating not exceeding 1,225 bHp;

[18 AAC 50.040(j) & 50.326(j)]

[40 C.F.R. 71.6(a)(1)]

⁵ Pre-Construction refers to Minor Permits and Construction Permits.

[Condition 4, Minor Permit AQ0923MSS11, June 12, 2017]

20. Notification and Reporting Requirements. The Permittee shall submit the following notification and reports to the Department as follows:

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)]

20.1. Submission of Drilling Rig Information. Upon revisions to the emissions unit inventory of the selected drilling rig, notify the Department of the following information, as set forth in Condition 92:

- a. the name of the selected drilling rigs (e.g., Nabors 245E, DDR);
- b. an emissions unit inventory listing each combustion unit in the drilling rig, along with the make/model and rating of each combustion unit;
- c. the cumulative capacity of the Drilling Rig engines;
- d. the cumulative capacity of the drilling rig boilers / heaters; and
- e. a statement as to whether the selected drilling rig complies with the requirements under Conditions 18.1 and 18.2.

[Condition 8, Minor Permit AQ0923MSS11, June 12, 2017]

20.2. Notification of Change of NRE Status. Submit a written Notice to the Department, as set forth in Condition 92, in the event a rig engine or work-over engine EU loses its nonroad engine status and becomes a stationary engine.

- a. Label each NRE listed in Table A that becomes a stationary EU within 30 days of EU status change. Place the EU ID in a conspicuous location on or adjacent to the unit.

[18 AAC 50.040(j)(4), 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]

20.3. Emissions and Fuel Control Settings and Stacks. The Permittee shall provide the revised settings and the reason for the revision in the operating report submitted under Condition 95 for that reporting period, if the Permittee makes changes to:

- a. the emission and fuel control settings and stacks of the turbines, EU IDs 1, 2, 32, and 33; and
- b. the emission and fuel control settings on any of the engines, EU IDs 3, 47, 49, 50, 64, 68, 93, and 116.

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

[Conditions 6 & 7, Minor Permit AQ0923MSS11, June 12, 2017]

20.4. If the cumulative EU rating limits under Conditions 18.1.b, 18.2.b, and 19.2 are exceeded, or if any of Conditions 17 through 20 are not met, submit an excess emissions and permit deviation report under Condition 94.

[Condition 9, Minor Permit AQ0923MSS11, June 12, 2017]

ORLs to Avoid PSD Review under 18 AAC 50.306

21. Carbon Monoxide (CO) and Nitrogen Oxide (NO_x) Limits. The Permittee shall limit the total combined emissions from EU IDs 1, 2, 3, 4, 9 through 13, 23, 24, 32, 33, 47, 49, 50, 64, 68, 69, 70, 71, 93 through 96, 98 through 101, 106 through 112, and 114 through 116 listed in Table A to no more than 225 tons per 12-month rolling period for each of pollutants CO and NO_x.

21.1. Monitor, record, and report as follows:

- a. **Group A (Fuel Gas-fired Solar Taurus 70 Gas Turbines, EU IDs 1, 2, 32 (when firing fuel gas), and 33).** For Group A EUs, the Permittee shall comply with the following:
 - (i) Capture the *60-second average load* in percent of full load and the *60-second average inlet air temperature* in degrees Fahrenheit (°F) for each EU during all periods of operation. Record for each calendar day, the minimum *60-second average load* and the minimum *60-second average inlet air temperature*.
 - (ii) Except as noted below, round the *60-second average load* up to the next higher load and round the *60-second air inlet temperature* down to the next lower inlet air temperature presented in Table E and Table F of Appendix A. Consider all *60-second average loads* between 40 percent (inclusive) and 45 percent (exclusive), as 40 percent loads.
 - (iii) Using the method described in Condition 21.1.a(iv), determine the pounds (lb) of CO and NO_x emitted during the 60-second period for the given *60-second average load* and *60-second average inlet air temperature*, as rounded under Condition 21.1.a(ii). For each hour, calculate and record the hourly CO and NO_x emissions in lb.
 - (iv) When calculating the CO and NO_x emissions under Condition 21.1.a(iii), the Permittee must use either the pounds per minute (lb/min) CO and NO_x emission values listed in Table E and Table F of Appendix A or Department-approved substitute lb/min values. Use one of the following approaches if a parameter measured under Condition 21.1.a is missing or suspect. Note which approach is used (if applicable) in the operating report submitted under Condition 95.
 - (A) If the *60-second average load* is unknown or suspect, use the largest lb/min CO and NO_x emissions value in Table E and Table F of Appendix A (or the substitute worst-case lb/min value) for the given inlet air temperature; or
 - (B) If the *60-second average inlet temperature* is unknown or suspect:
 - (1) use the largest lb/min CO and NO_x emissions value in Table E and Table F of Appendix A (or the worst-case lb/min value) for the given load; or

- (2) obtain the ambient temperature measured by the National Weather Service (NWS) at the Deadhorse Airport for each hour of missing inlet air temperature and use the NWS temperature in lieu of the inlet air temperature when calculating the pounds of CO and NO_x under Condition 21.1.a(iii).
 - (C) If the *60-second average load* and the *60-second average inlet air* temperature are both unknown or suspect, use 17.03 lb/min for CO emissions calculations and 0.78 lb/min for NO_x emissions calculations or Department-approved substitute maximum lb/min values.
 - (v) By the end of each calendar month, calculate and record the *monthly CO and NO_x emissions* (in lb) for each EU, the *cumulative monthly CO and NO_x emissions* (in lb), and the *12-month rolling CO and NO_x emissions* in tons for the previous month.
- b. **Group B (Diesel Internal Combustion Engines, EU IDs 3, 47, 49, 50, 64, 68, 93, 116))⁶.** For Group B, the Permittee shall comply with the following:
 - (i) Maintain a dedicated engine hour meter on each EU listed in Condition 21.1.b.
 - (ii) Calculate and record the *monthly CO and NO_x emissions* in pounds (lb) for each EU as follows:
 - (A) For each calendar month, monitor and record the *total monthly hours of operation* of the EU.
 - (B) By the end of each month, calculate the *monthly CO and NO_x emissions* (in lb) for the previous month for each EU using a Department approved emission factor⁷, as listed in Table G. If the *total monthly hours of operation* is unknown or suspect, use the total hours for that month.
 - (iii) By the end of each calendar month, calculate and record the *cumulative monthly CO and NO_x emissions* (in lb) and the *12-month rolling CO and NO_x emissions* (in tons).
- c. **Group C (Flares, EU ID 4).** For Group C, the Permittee shall comply with the following:
 - (i) Monitor and record the volume of flared gas in standard million cubic feet (MMscf) on a monthly basis.

⁶ Group B also includes any additional nonroad engines that become stationary during the life of the permit

⁷ Emission Factor determined from performance tests, provided by equipment manufacturer, listed in Table G, or derived from emission factors listed in Table G.

- (ii) By the end of each month, calculate, and record the *monthly CO and NO_x emissions* (in lb) by using a representative fuel gas analysis and the emission factors: 0.31 lb/MMBtu to calculate the CO emissions and 0.068 lb/MMBtu to calculate the NO_x emissions.
 - (iii) By the end of each calendar month, calculate and record the *12-month rolling CO and NO_x emissions (in tons)*.
- d. **Group D (Heaters and Boilers, EU IDs 9 through 13, 23, 24, 69, 70, 71, 94, 95, 98 through 101, 106 through 112, 114, and 115).** For Group D, the Permittee shall comply with the following:
 - (i) Determine and record the *monthly hours of operation* for each EU using one of the following three methods. The Permittee does not need to use the same method for all EUs. Identify the method selected for each EU in the operating report under Condition 95.
 - (A) Daily Operation Method
 - (1) For each calendar day, monitor and record whether the EU was operated.
 - (2) By the end of each calendar month, calculate the *monthly hours of operation* during the previous month by multiplying the days operated by 24 hours.
 - (B) Hourly Operation Method
 - (1) Monitor and record each start-up and shutdown time.
 - (2) By the end of each calendar month, review the start-up and shutdown times during the previous month and determine the *monthly hours of operation*. Round portions of an hour up to the next quarter hour fraction.
 - (C) Monthly Operation Method
 - (1) For each EU with an hour meter, monitor and record the total hours of operation for each calendar month.
 - (ii) By the end of each calendar month, calculate, and record the *monthly CO and NO_x emissions* (in lb) during the previous month of each
 - (A) diesel-fired EU using the emission factors: 0.0417 lb/MMBtu for CO emissions and 0.1667 lb/MMBtu for NO_x emissions;
 - (B) propane-fired EU using the emission factors: 0.0829 lb/MMBtu for CO emissions and 0.1436 lb/MMBtu for NO_x emissions; and
 - (C) fuel gas-fired EU using the emission factors: 84 lb/MMscf for CO emissions and 100 lb/MMscf for NO_x emissions.

- (iii) By the end of each calendar month, calculate, and record the *cumulative monthly CO and NO_x emissions* (in pounds) and the *12-month rolling CO and NO_x emissions* (in tons).
 - e. **Group E (Incinerator, EU ID 96).** For Group E, the Permittee shall comply with the following:
 - (i) Determine and record the *monthly amount of waste burned* (in tons) for EU ID 96.
 - (ii) By the end of each calendar month, calculate, and record the *monthly CO and NO_x emissions* (in lb) using the emission factors: 10 lb/ton for CO emissions and 3 lb/ton for NO_x emissions.
 - (iii) By the end of each calendar month, calculate, and record the *cumulative monthly CO and NO_x emissions* (in lb) and the *12-month rolling CO and NO_x emissions* (in tons).
 - f. **Group F (Dual fuel-fired Turbine, EU ID 32 when firing liquid fuel).** For EU ID 32 when firing liquid fuel, the Permittee shall comply with the following:
 - (i) By the end of each calendar month, calculate, and record the *monthly CO and NO_x emissions* (in lb) using the emission factors: 10 lb/hr for CO emissions and 31.5 lb/hr for NO_x emissions.
 - (ii) By the end of each calendar month, calculate, and record the *cumulative monthly CO and NO_x emissions* (in lb) and the *12-month rolling CO and NO_x emissions* (in tons).
 - g. By the end of each calendar month, calculate and record the *total 12-month rolling CO and NO_x emissions* (in tons) for Groups A through F.
- 21.2. The Permittee may conduct selection and recording of data required in Conditions 21.1.a through 21.1.g electronically.
- 21.3. In each operating report submitted under Condition 95, report for each month of the reporting period:
 - a. the *total 12-month rolling CO and NO_x emissions* calculated under Condition 21.1.g;
 - b. the range of inlet air temperatures recorded for EU IDs 1, 2, 32 (when burning fuel gas and when burning liquid fuel) and 33 during the month; and
 - c. any periods where the monitoring equipment or electronic algorithm required under Condition 21.1, was malfunctioning or inoperable. Specify the malfunctioning or inoperable item with each period.
- 21.4. Report as specified in Condition 94, if the *total 12-month rolling CO and NO_x emissions* calculated under Condition 21.1.g for any 12-month period exceed 225 tons of CO or NO_x.

[Condition 14, Minor Permit AQ0923MSS11, June 12, 2017]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(1) & (3)]

22. Verification of Turbine Emission Factors. The Permittee shall conduct a winter performance test on one of EU IDs 1, 2, 32 (when burning fuel gas) or 33 to verify the NO_x and CO emission factors in Table E and Table F of Appendix A. Use the performance test procedures described in Condition 83.4. Winter is defined as the period between December 1st and April 1st.

- 22.1. Conduct the winter performance test no less than once every five years from the date of the previous test.
- 22.2. Except as noted in Condition 22.3, conduct the tests at the following turbine load⁸ and inlet temperature conditions:
 - a. Inlet temperature greater than 0°F and 80 percent to 90 percent load;
 - b. Inlet temperature greater than 0°F and load less than 50 percent load;
 - c. Inlet temperature less than 0°F and 80 percent to 90 percent load; and
 - d. Inlet temperature less than 0°F and load less than 50 percent.
- 22.3. If the weather conditions do not allow for an inlet temperature of less than 0°F, substitute the following for Conditions 22.2.c and 22.2.d: Inlet temperature greater than 0°F, and 60 to 70% load.
- 22.4. In the source test report submitted under Condition 89, compare the average CO emission factors in lb CO/min to the lb CO/min values listed Table F and the average NO_x emission factors in lb NO_x/min to the lb NO_x/min values listed in Table E, for each load and inlet temperature condition tested under Condition 22.2. All testing and reporting must be consistent with the following requirements:
 - a. Use Method 19 of 40 C.F.R. 60, or an alternative approach approved by the Department, for converting all parts per million by volume (ppmv) values into lb/min values. Describe all assumptions (including the assumed standard conditions) and provide example calculations.
 - b. For each individual test and test condition average, report the
 - (i) turbine inlet temperature;
 - (ii) the concurrent NWS temperature recorded at Deadhorse Airport;
 - (iii) the produced electrical power and percent load;
 - (iv) the NO_x and CO concentration in ppmv;
 - (v) the percent excess oxygen in the exhaust;

⁸ Percent load is defined as the actual output divided by the maximum output that could be produced by the turbine under the given operation conditions (e.g., inlet air temperature), times 100 (to convert from a fractional to percent format).

- (vi) the exhaust volume flow rate and exhaust temperature;
 - (vii) the gas producer speed;
 - (viii) the equivalent NO_x and CO mass emission rate (in lb/min);
 - (ix) whether inlet preheating was used; and
 - (x) whether the turbine was operated in or out of SoLoNO_x mode.
- c. Measure and report the heat content from a representative fuel sample.
 - d. Note in the source test report required under Condition 89 whether the turbine was operating under the same emission and fuel control settings provided in Condition 20.3. If not, provide the emission and fuel control settings used during the performance tests.

[18 AAC 50.040(j)(4) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]

Ambient Air Quality Standards (AAQS) Protection Requirements

23. General AAQS Provisions. The Permittee shall comply with the following provisions to protect the NO₂, SO₂, and PM-10 AAQS:

- 23.1. **Air Quality Boundary:** Establish and maintain the ambient boundaries using the procedures described in Condition 24.
- 23.2. **Stack Configuration:** For all stationary fuel-burning EUs listed in Table A, maintain each exhaust stack with uncapped vertical outlets, except as follows:
 - a. Flapper valves or similar are allowed as long as they do not hinder the vertical momentum of the exhaust plume.
 - b. The Permittee may use capped stacks for the following units: EU IDs 47, 69 through 71, 94, 95, and 106 through 112, 114, and 115.
 - c. Intermittent well service equipment rated at less than 400 bHp or 2.8 MMBtu/hr (as applicable) are exempt from Condition 23.2.
- 23.3. Maintain the exhaust stack for each EU listed in Table B with a release height (above ground) that meets or exceeds the indicated height.

Table B - Minimum Stack Height Requirements

EU ID	Emissions unit Description	Minimum Release Height Above Ground (m)
1, 2, 32, and 33	Gas Turbines #1 through #4	28.0
3	Standby Generator - Reciprocating Engine	7.0
47	Standby Generator E04 Reciprocating Engine	8.2
9 through 13	On-Shore Rig Heaters #1 through #3 and Boilers #1 and #2	12.8
49	Standby Generator E07 Reciprocating Engine	12.8
50	Fire Water Pump	11.7
14 through 17	On-Shore Rig Engines #1 through #4 (NRE)	14.8
64	WIF Generator Reciprocating Engine	11.3
68	WIF Cement Pump Engine #1	6.4
78	Construction Power Generator #1 (NRE)	6.1
93	Standby Generator Reciprocating Engine	6.0
94 and 95	NOC Camp Boilers #1 and #2	7.7
98 and 99	Offshore Rig Boilers #1 and #2	11.6
100	Offshore Rig Heater #1	12.6
101	Offshore Rig Heater #2	12.1
102, 103, and 104	Offshore Rig Reciprocating Engines #1 through #3 (NRE)	13.0
105	Offshore Rig Reciprocating Engine #4 (NRE)	12.2
106	Standby Heater	8.0
116	WIF Cement Pump Engine #2	6.4

23.4. **On-Site Housing:** If providing on-site housing, follow the procedures described in Condition 25.

23.5. **Cumulative Capacity:** Comply with each cumulative capacity limit in Conditions 18.1.b, 18.2.b, and 19.2. Notify and report in accordance with Conditions 20.1 and 20.4.

[Condition 15 and Table 5, Minor Permit AQ0923MSS11, June 12, 2017]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)]

24. Public Access Control Plan⁹. The Permittee shall establish and maintain the ambient air boundaries as follows:

- 24.1. Comply with the provisions contained in the “Nikaichuq Project Public Access Control Plan” (as provided in Appendix B), or a subsequent written version approved by the Department that contains at least the following elements:
- a scaled map that clearly shows the ambient air boundaries, coast line, spill response boat ramp, Kuparuk Seawater Treatment Plant, Oliktok Road, and warning sign locations;
 - ambient boundaries that are consistent with the land owner’s authorization to preclude public access from the area within the boundaries;

⁹ Public Access Control Plan as provided by Eni and presented in Appendix B. Eni revised the original plan.

- c. defined methods of establishing and maintaining the boundary, such as surveillance and posting of strategically located warning signs (provide size, wording, and inspection/repair schedule);
- d. the date of the Public Access Control Plan; and
- e. the procedure for approaching unauthorized people who have crossed the ambient air boundary.

24.2. Post and maintain all warning signs described in the Public Access Control Plan as follows:

- a. post all signs as stated in the Public Access Control Plan;
- b. use a font style, size, and contrast coloring that makes all lettering easy to read;
- c. inspect and repair the signs according to the schedule described in the Public Access Control Plan; and
- d. keep all signs free of nearby visible obstructions (including wind-blown snow), as safety allows.

[Condition 16, Minor Permit AQ0923MSS11, June 12, 2017]

[18 AAC 50.040(j) & 50.326(j)]

[40 C.F.R. 71.6(a)]

25. Eni Working Times and Hours Policy. Comply with the provisions contained in the November 6, 2009 “Eni Local Policy” (as provided in Appendix C), or a subsequent written version approved by the Department that contains at least the following elements:

- 25.1. a statement specifying that the worker housing area is for official business / worker use only; and
- 25.2. a statement specifying that the on-site workers are on 24-hour call.

[Condition 17, Minor Permit AQ0923MSS11, June 12, 2017]

[18 AAC 50.040(j) & 50.326(j)]

[40 C.F.R. 71.6(a)]

26. Annual Average NO₂ and SO₂ AAQS Protection. The Permittee shall protect the annual average NO₂ and SO₂ ambient air quality standards by complying with Conditions 26.1 through 26.3.

- 26.1. Limit the operation of EU IDs 3, 32, 49, 50, 78, and 93 as specified in Table C. Monitor, record, and report as follows:
 - a. Maintain a dedicated engine hour meter on each EU listed in Table C.
 - b. For each calendar month, monitor and record the total hours of operation of each EU listed in Table C during the month, except
 - (i) when conducting a source test required for EU ID 32 under Condition 28.2.

- c. By the end of each month, calculate and record the cumulative hours of operation for each EU listed in Table C during the previous 12 months.
- d. In each operating report submitted under Condition 95, report for each month of the reporting period the hours recorded under Conditions 26.1.b and 26.1.c.
- e. Report as specified in Condition 94, if the operational hours of any of EU IDs 3, 32, 49, 50, 78, and 93 exceeds the limit listed in Table C.

Table C - Annual Operating Limits of Emissions units

EU ID	Emissions unit Description	Operating Limit
3	Standby Generator Reciprocating Engine	2,000 hr/yr
32	Dual Fuel-Fired Turbine	600 hr/yr (when firing diesel); unlimited operation when firing gaseous fuel
49	Standby Generator Engine E07 Reciprocating Engine	2,000 hr/yr each
50	Fire Water Pump	100 hr/yr
78	Construction Power Generator #1 (NRE)	1,500 hr/yr
93	Standby Generator - Reciprocating Engine	500 hr/yr

[Conditions 18.1, 22.1(a) – (c) & (e), and Table 6, Minor Permit AQ0923MSS11, June 12, 2017]

26.2. Limit the operation of the Workover Rig (EU IDs 19 through 24 listed in Table A) to 55 days per consecutive 12-month period. Monitor, record, and report as follows:

- a. For each calendar month in which the Workover Rig is on site, monitor and record the total days of operation during the month. Days of operation includes movement between wellheads but does not include transportation to and from the Nikaichuq onshore and offshore pads.
- b. By the end of each calendar month, calculate and record the cumulative days of operation during the previous 12 months. During the initial 12 months of operation, use the operating period to date as a substitute for the 12-month period.
- c. In each operating report submitted under Condition 95, report for each month of the reporting period the days of operation recorded under Condition 26.2.a and 26.2.b.
- d. Report as specified in Condition 94, if the days of operation recorded under Condition 26.2.b exceed the limit specified in Condition 26.2.

[Conditions 18.2, Minor Permit AQ0923MSS11, June 12, 2017]

26.3. Limit the operation of EU ID 123 to 120 days per consecutive 12-month period. Monitor, record, and report as follows:

- a. For each calendar month in which EU ID 123 is on site, monitor and record the total days of operation during the month.

- b. By the end of each calendar month, calculate and record the cumulative days of operation during the previous 12 months. During the initial 12 months of operation, use the operating period to date as a substitute for the 12-month period.
- c. In each operating report submitted under Condition 95, report for each month of the reporting period the days of operation recorded under Condition 26.3.a and 26.3.b.
- d. Report as specified in Condition 94, if the days of operation recorded under Condition 26.3.b exceed the limit specified in Condition 26.3.

[Condition 18.3, Minor Permit AQ0923MSS11, June 12, 2017]

[18 AAC 50.040(j) & 50.326(j)]

[40 C.F.R. 71.6(a)]

27. Annual, 24-hr, and 3-hr Average SO₂ AAQS Protection. The Permittee shall protect the annual, 24-hr, and 3-hr average SO₂ AAQS by complying with Conditions 27.1 through 27.3.

27.1. For EU IDs 1, 2, 4, 32 (while burning natural gas), 33, and 106, burn only natural gas with hydrogen sulfide (H₂S) content not exceeding 250 ppmv (on an instantaneous basis at standard conditions). Monitor, record, and report as follows:

- a. Monitor compliance monthly using ASTM D 4810-88, D 4913-89, or Gas Producers Association 2377-86, or an alternative analytical method approved by the Department.
- b. The records of the monitoring conducted under Condition 27.1.a may be kept in electronic format.
- c. In each operating report submitted under Condition 95, report for each month of the reporting period the results of the monitoring conducted under Condition 27.1.a.
- d. Report as specified in Condition 94, if H₂S content of the fuel gas exceeds 250 ppmv at any time.

27.2. For diesel fuel-burning EUs, the Permittee shall burn only ultra low sulfur diesel (ULSD) fuel¹⁰. Monitor, record, and report as follows:

- a. For each shipment of fuel, keep receipts that specify fuel grade and amount.
- b. Clearly label the fuel tanks for the diesel burning EUs as “ULSD Only”.
- c. In each operating report submitted under Condition 95, report the sulfur content(s) of the diesel fuel burned, or a statement that only ULSD was burned during the reporting period, in each of the EUs.
- d. Report as specified in Condition 94, if the sulfur content of the diesel fuel burned in any EU exceeds 15 ppmw.

¹⁰ ULSD is diesel fuel with sulfur content not exceeding 15 ppmw.

- 27.3. For propane-burning EUs, the Permittee shall burn only propane with sulfur content not exceeding 185 ppmw. Monitor, record, and report as follows:
- For each shipment of fuel, keep receipts that specify fuel grade and amount.
 - Clearly label the fuel tanks for the propane burning EUs as “Propane Only”.
 - In each operating report submitted under Condition 95, report the sulfur content(s) of the fuel burned during the reporting period, or a statement that the sulfur content of the propane burned in each of the EUs did not exceed 185 ppmw.
 - Report as specified in Condition 94 if the sulfur content of the fuel burned in any EU exceeds 185 ppmw.

[18 AAC 50.040(j) & 50.326(j)]

[40 C.F.R. 71.6(a)]

[Condition 19, Minor Permit AQ0923MSS11, June 12, 2017]

- 28. Source Testing Requirements, EU ID 32.** If the 12 month rolling total operating hours for EU ID 32 when operating on ULSD exceeds the limit specified in Table C, the Permittee shall comply with the following:

- 28.1. Within 60 days after the permit deviation report under Condition 26.1.e is due, submit to the Department a complete plan for conducting a source test to verify NO_x and CO emission factors specified in Condition 21.1.f using the applicable test methods set out in 40 C.F.R. Part 60, Appendix A. The Permittee may propose alternative test methods if it can be shown to be of equivalent accuracy, and will ensure compliance with the applicable standards or limits. The Department must approve the source test plan prior to the test date;
- 28.2. Conduct a source test within 180 days of Department approval of the plan submitted under Condition 28.1;
- 28.3. Within 60 days after completion of the source test required under Condition 28.2, submit the results; and
- 28.4. In the source test report submitted under Condition 28.3 compare the NO_x and CO emissions factors in lb/min to the NO_x and CO emission factors specified in Condition 21.1.f. Propose revised NO_x and CO emission factors in lb/min for Department approval if source test results exceed the NO_x and CO emission factors specified in Condition 21.1.f.

[18 AAC 50.040(j)(4) & 50.326(j)(3)]

[40 C.F.R. 71.6(a)(1) & (a)(3)]

[Condition 22.1(d), Minor Permit AQ0923MSS11, June 12, 2017]

NSPS Subpart Ec Exemption Requirements, EU ID 96

- 29. Hospital and Medical/Infectious Waste Incineration (HMIWI) as a Co-fired Combustor.¹¹** To demonstrate exemption from the NSPS Subpart Ec requirements as a co-

¹¹ As defined in 40 C.F.R. 60.51c, “Co-fired combustor means a unit combusting hospital waste and/or medical/infectious waste with other fuels or wastes (e.g., coal, municipal solid waste) and **subject to an enforceable requirement** limiting the unit to combusting a fuel feed stream, 10 percent or less of the weight of which is comprised, in aggregate, of hospital waste and

fired combustor, the Permittee shall limit the amount of hospital, medical, and infectious (HMI) wastes combusted in the incinerator, EU ID 96, to no more than 10 percent by weight of the wastes and fuels combusted on a calendar quarter basis. Monitor, record, and report as follows:

29.1. Keep records on a calendar quarter basis of the following:

- a. weight of HMI waste combusted;
- b. the weight of all other fuels and wastes combusted; and
- c. the total weight of all fuels and wastes combusted; i.e., the sum of the weights recorded in Conditions 29.1.a and 29.1.b.

29.2. At the end of each calendar quarter, calculate and record the percent by weight of HMI waste in the total weight of all fuels and wastes combusted, as follows:

$$\% \text{ HMI waste} = (W_{\text{HMI}}/W_{\text{total}}) \times 100$$

Where:

% HMI waste = percent weight of HMI combusted in each calendar quarter

W_{HMI} = total weight of HMI burned in each calendar quarter

W_{total} = total weight of all fuels and wastes burned in each calendar quarter

29.3. Report under Condition 95 the percent weight of HMI waste, as calculated in Condition 29.2, for each calendar quarter in the reporting period.

29.4. Report as a permit deviation under Condition 94, if the percent weight of HMI waste, as calculated in Condition 29.2, for each calendar quarter exceeds the limit in Condition 29.

[18 AAC 50.040(a)(2)(G) & (j)(4) & 50.326(j)]

[40 C.F.R. 71.6(a)(1) & (a)(3)]

[40 C.F.R. 60.50c(c) & 60.51c, Subpart Ec]

[Condition 23, Minor Permit AQ0923MSS11, June 12, 2017]

medical/infectious waste as measured on a calendar quarter basis. For purposes of this definition, pathological waste, chemotherapeutic waste, and low-level radioactive waste are considered “other” wastes when calculating the percentage of hospital waste and medical/infectious waste combusted.”

Section 5. Federal Requirements

40 C.F.R. Part 60 New Source Performance Standards (NSPS)

- 30. NSPS Subpart A Notification.** Unless exempted by a specific subpart, for any affected facility¹² or existing facility¹³ regulated under NSPS requirements in 40 C.F.R. 60, the Permittee shall furnish the Administrator¹⁴ written notification or, if acceptable to both the EPA and the Permittee, electronic notification, as follows:

[18 AAC 50.035 & 50.040(a)(1)]
[40 C.F.R. 60.7(a) & 60.15(d), Subpart A]

- 30.1. a notification of the date construction (or reconstruction as defined under 40 C.F.R. 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form;

[40 C.F.R. 60.7(a)(1), Subpart A]

- 30.2. a notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date;

[40 C.F.R. 60.7(a)(3), Subpart A]

- 30.3. a notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 C.F.R. 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include:¹⁵

- a. information describing the precise nature of the change,
- b. present and proposed emission control systems,
- c. productive capacity of the facility before and after the change, and
- d. the expected completion date of the change.

[40 C.F.R. 60.7(a)(4), Subpart A]

- 30.4. a notification of any proposed replacement of an existing facility, for which the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, postmarked as soon as practicable, but no less than 60 days before commencement of replacement, and including the following information:

- a. the name and address of owner or operator,

¹² *Affected facility* means, with reference to a stationary source, any apparatus to which a standard applies, as defined in 40 C.F.R. 60.2.

¹³ *Existing facility* means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in 40 C.F.R. Part 60, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type, as defined in 40 C.F.R. 60.2.

¹⁴ The Department defines the “the Administrator” to mean “the EPA and the Department.”

¹⁵ The Department and EPA may request additional relevant information subsequent to this notice.

- b. the location of the existing facility,
- c. a brief description of the existing facility and the components that are to be replaced,
- d. a description of the existing and proposed air pollution control equipment,
- e. an estimate of the fixed capital cost of the replacements, and of constructing a comparable entirely new facility,
- f. the estimated life of the existing facility after the replacements, and
- g. a discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.

[40 C.F.R. 60.15(d), Subpart A]

- 31. NSPS Subpart A Startup, Shutdown, & Malfunction Requirements.** The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EU IDs 1, 2, 32, and 33, any malfunctions of associated air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EU IDs 1, 2, 32, or 33 is inoperative.

[18 AAC 50.040(a)(1)]

[40 C.F.R. 60.7(b), Subpart A]

- 32. NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report.** The Permittee shall submit to the Department and to EPA a written excess emissions and monitoring systems performance (EEMSP)¹⁶ report any time the limit in Condition 50 for which continuous emission monitoring is being conducted, has been exceeded as described in this condition. Submit the EEMSP reports with the summary report form as required in Condition 33. Written reports of excess emissions shall include the following information:

[18 AAC 50.040(a)(1)]

[40 C.F.R. 60.7(c), Subpart A]

- 32.1. The magnitude of excess emissions computed in accordance with 40 C.F.R. 60.13(h), any conversion factors used, the date and time of commencement and completion of each time period of excess emissions, and the process operating time during the reporting period.

[40 C.F.R. 60.7(c)(1), Subpart A]

- 32.2. Identification of each period of excess emissions that occurred during startup, shutdown, and malfunction of EU IDs 1, 2, 32, and 33, the nature and cause of any malfunction, and the corrective action taken or preventative measures adopted.

[40 C.F.R. 60.7(c)(2), Subpart A]

- 32.3. The date and time identifying each period during which a Continuous Monitoring System (CMS) was inoperative except for zero and span checks and the nature of any repairs or adjustments.

[40 C.F.R. 60.7(c)(3), Subpart A]

¹⁶ The federal EEMSP report is not the same as the state excess emission report required by Condition 94.

- 32.4. A statement indicating whether or not any excess emissions occurred or the CMS was inoperative, repaired, or adjusted, at any time during the reporting period.

[40 C.F.R. 60.7(c)(4), Subpart A]

- 33. NSPS Subpart A Summary Report Form.** The Permittee shall submit to the Department and to EPA one "summary report form" in the format shown in Figure 1 of 40 C.F.R. 60.7 (see Section 15) for each pollutant continuously or periodically required to be monitored (applies to EU IDs 1, 2, 32, and 33 under Subpart KKKK for SO₂) unless an exemption from continuous or periodic monitoring is applied under the NSPS. The report shall be submitted semiannually, postmarked by the 30th day following the end of each 6-month period, except when more frequent reporting is specifically required by an applicable subpart, case-by-case basis, or the EPA, as follows:

[18 AAC 50.040(a)(1)]

[40 C.F.R. 60.7(c) & (d), Subpart A]

- 33.1. If the total duration of excess emissions for the reporting period is less than one percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than five percent of the total operating time for the reporting period, submit a summary report form **unless** the EEMSP report described in Condition 32 is requested, or

[40 C.F.R. 60.7(d)(1), Subpart A]

- 33.2. If the total duration of excess emissions for the reporting period is one percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is five percent or greater of the total time for the reporting period, then submit a summary report form **and the EEMSP** described in Condition 32.

[40 C.F.R. 60.7(d)(2), Subpart A]

- 34. NSPS Subpart A Performance (Source) Tests.** The Permittee shall conduct source tests according to 40 C.F.R. 60.8 and Section 7 at such times as may be required by the Administrator, and shall provide the Department and EPA with a written report of the results of the source test.

[18 AAC 50.040(a)(1)]

[40 C.F.R. 60.8(a), Subpart A]

- 35. NSPS Subpart A Good Air Pollution Control Practice (GAPCP).** At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU ID 106, including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EU ID 106.

[18 AAC 50.040(a)(1)]

[40 C.F.R. 60.11(d), Subpart A]

- 36. NSPS Subpart A Credible Evidence.** For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 41, 42, 48, and 50, nothing in 40 C.F.R. Part 60 shall

preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1, 2, 3, 32, 33, 47, 49, 50, 64, 93, and 106, would have been in compliance with applicable requirements of 40 C.F.R. Part 60 if the appropriate performance or compliance test or procedure had been performed.

[18 AAC 50.040(a)(1)]
[40 C.F.R. 60.11(g), Subpart A]

- 37. NSPS Subpart A Concealment of Emissions.** The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Conditions 41, 42, 48, and 50. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[18 AAC 50.040(a)(1)]
[40 C.F.R. 60.12, Subpart A]

Subpart Dc – Steam Generating Units

- 38. NSPS Subpart Dc Fuel Consumption.** For EU ID 106 listed in Table A, the Permittee shall record the amounts of each fuel combusted during each day and maintain the records in accordance with Condition 90.

- 38.1. As an alternative to meeting the requirements of Condition 38, for an affected emissions unit that combusts only natural gas or fuel gas, the Permittee may elect to record the amount of each fuel combusted during each calendar month and maintain the records in accordance with Condition 90.

[18 AAC 50.040(a)(2)(D)]
[40 C.F.R. 60.48c(g) & (i), Subpart Dc]

Subpart IIII¹⁷ – Compression Ignition Internal Combustion Engines (CI ICE)

- 39. NSPS Subpart IIII Applicability and General Compliance Requirements.** For EU IDs 3, 47, 49, 50, 64, and 93 listed in Table A, the Permittee shall comply with the applicable requirements of 40 C.F.R. 60, Subpart IIII for stationary compression ignition (CI) internal combustion engine (ICE) whose construction commences¹⁸ after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006 (for the non-emergency engines, EU IDs 3, 47, 49, 64, and 93) and after July 1, 2006 (for the fire pump engine, EU ID 50).

- 39.1. For EU IDs 3, 47, 49, 50, 64, and 93, the Permittee shall comply with the applicable provisions of 40 C.F.R. 60 Subpart A as specified in Table 8 to Subpart IIII, and applicable provisions of Subpart IIII as specified in Conditions 40 through 44.

[18 AAC 50.040(a)(2)(OO) & (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.4200(a)(2)(i) & (e), 60.4218 & Table 8, Subpart IIII]

- 40. NSPS Subpart IIII GAPCP.** Except as permitted under Condition 40.1, operate and maintain each of EU IDs 3, 47, 49, 50, 64, and 93 and control device according to the

¹⁷ The provisions of NSPS Subpart IIII listed in Conditions 39 through 45 are current as of July 7, 2016. Should EPA promulgate revisions to this subpart, the Permittee shall be subject to the revised final provisions as promulgated and not the superseded provisions summarized in these conditions.

¹⁸ For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

manufacturer's written instructions and meet the applicable emissions standards over the entire life of the engine. In addition, the Permittee may only change those settings that are permitted by the manufacturer.

[40 C.F.R. 60.4206 & 60.4211(a), Subpart IIII]

40.1. If the Permittee does not install, configure, operate, and maintain EU IDs 3, 47, 49, 50, 64, and 93 and control devices according to the manufacturer's emission-related written instructions, or changes emission-related settings in a way that is not permitted by the manufacturer, the Permittee shall demonstrate compliance as follows:

- a. Keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.
- b. In addition, conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.
- c. Conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

[40 C.F.R. 60.4211(g)(3), Subpart IIII]

- d. Conduct performance tests and meet the not-to-exceed standards in accordance with the applicable requirements indicated in 40 C.F.R. 60.4212.

[40 C.F.R. 60.4204(d) and 60.4212(a) - (e), Subpart IIII]

41. NSPS Subpart IIII Fuel Requirements.¹⁹ The Permittee shall comply with the following:

41.1. For EU IDs 3 and 93, use diesel fuel that meets the requirements of 40 C.F.R. 80.510(b) for nonroad diesel fuel, as follows:

- a. Sulfur content of 15 ppm maximum per-gallon (ULSD) standards; and
- b. Cetane index or aromatic content, as follows:
 - (i) A minimum cetane index of 40; or
 - (ii) A maximum aromatic content of 35 volume percent.

[40 C.F.R. 60.4207(b), Subpart IIII & 80.510(b), Subpart I]

41.2. For EU IDs 47, 49, 50, and 64, the Permittee may use fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel.

- a. The sulfur content of the used lubricating oil must be less than 200 ppm.

¹⁹ In accordance with 40 C.F.R. 60.4216(d), EU IDs 11 and 12 (pre-2014 model year stationary CI ICE located in remote areas of Alaska) are not subject to the fuel provisions of 40 C.F.R. 60.4207.

- b. The used lubricating oil must meet the on-specification levels and properties for used oil in 40 C.F.R. 279.11.

[18 AAC 50.040(a)(2)(OO) & (j); & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.4216(f), Subpart III]

42. NSPS Subpart IIII Emission Standards. For EU IDs 3, 47, 49, 50, 64, and 93, the Permittee shall comply with the following emission standards:

[18 AAC 50.040(a)(2)(OO) & (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]

- 42.1. Exhaust emission from EU IDs 3, 47 and 49 (pre-2007 model year and 2007-2010 model year with maximum engine power > 2,237 kW (3,000 Hp) stationary non-emergency CI ICE, with a displacement of less than 30 liters per cylinder) shall not exceed the following (Tier 1 standards):

- a. 1.0 g/Hp-hr for HC;
- b. 6.9 g/Hp-hr for NO_x;
- c. 8.5 g/Hp-hr for CO; and
- d. 0.40 g/Hp-hr for PM.

[40 C.F.R. 60.4201(b), 60.4204(b), 60.4216(c), 60.4202(b)(1), 60.4205(a) & (b), & Table 1, Subpart III]

- 42.2. Exhaust emission from EU ID 64 (2007 model year and later with maximum engine power ≤ 450 Hp) non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder) shall not exceed the following applicable exhaust emission standards (Tier 3 standards):

- a. 3.0 g/Hp-hr for NMHC + NO_x;
- b. 2.6 g/Hp-hr for CO; and
- c. 0.15 g/Hp-hr for PM.

[40 C.F.R. 60.4216(c), 60.4205(b) & 60.4202(a)(2), Subpart III]
[40 C.F.R. 89.112(a) & Table 1, Subpart B]

- 42.3. Exhaust emission from EU ID 93 (2007 model year and later with maximum engine power >560 Hp) non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder) shall not exceed the following applicable exhaust emission standards (Tier 2 standards):

- a. 4.8 g/Hp-hr for NMHC + NO_x;
- b. 2.6 g/Hp-hr for CO; and
- c. 0.15 g/Hp-hr for PM.

[40 C.F.R. 60.4201(a) & 60.4204(b), Subpart III]
[40 C.F.R. 89.112(a) & Table 1, Subpart B]

- 42.4. Exhaust opacity from EU IDs 64 and 93 must not exceed

- a. 20 percent during the acceleration mode;
- b. 15 percent during the lugging mode; and
- c. 50 percent during the peaks in either the acceleration or lugging modes.

[40 C.F.R. 60.4216(c), 60.4205(b) & 60.4202(a)(2), Subpart III]

[40 C.F.R. 60.4201(a) & 60.4204(b), Subpart III]

[40 C.F.R. 89.113(a), Subpart B]

42.5. Exhaust emission from EU ID 50 (stationary fire pump CI ICE) shall not exceed the following applicable exhaust emission standards:

- a. 3.0 g/Hp-hr for NMHC + NO_x;
- b. 0.15 g/Hp-hr for PM.

[40 C.F.R. 60.4205(c) & Table 4, Subpart III]

43. NSPS Subpart III Monitoring and Recordkeeping. The Permittee shall comply with the following:

[18 AAC 50.040(a)(2)(OO) & (j)(4) & 50.326(j)]

[40 C.F.R. 71.6(a)(3)(i) & (ii) & (c)(6)]

43.1. For EU ID 49, demonstrate compliance with the emission standards by keeping records of engine manufacturer data indicating compliance with the applicable emission standards in Condition 42.1.

[40 C.F.R. 60.4211(b)(3), Subpart III]

43.2. For EU IDs 3, 47, 50, 64, and 93, demonstrate compliance with the emission standards by purchasing an engine certified to the applicable emission standards in Conditions 42.1 through 42.5. The engines must be installed and configured according to the manufacturer's specifications, except as permitted in Condition 40.1.

[40 C.F.R. 60.4211(c), Subpart III]

43.3. For compliance of EU IDs 3 and 93 with the fuel requirements under Condition 41.1, monitor, record, and report in accordance with Condition 27.2.

[40 C.F.R. 71.6(c)(6)]

43.4. For EU IDs 47, 49, 50, and 64, if using fuels mixed with used lubricating oil as specified in Condition 41.2, comply with the following:

- a. Determine that the used oil to be burned for energy recovery meets the fuel specifications of 40 C.F.R. 279.11 and the sulfur content limit in Condition 41.2.a by performing approved analyses or obtaining copies of analyses or other information documenting that the used oil fuel meets the specifications.
- b. Keep records of the following:
 - (i) copies of analyses of the used oil (or other information used to make the compliance determination in Condition 43.4.a) for three years;
 - (ii) the amount of the used lubricating oil to be blended;

- (iii) the amount of other distillate fuel oil to be mixed with the used lubricating oil; and
- (iv) the ratio of the lubricating oil to the total fuel blend.

[40 C.F.R. 71.6(c)(6)]
[40 C.F.R. 279.72(a) & (b)]

43.5. The Permittee shall comply with the following requirements for emergency stationary CI ICE, EU ID 50, under Subpart IIII:

- a. Install a non-resettable hour meter prior to startup of the engine.

[40 C.F.R. 60.4209(a), Subpart IIII]

- b. Operate EU ID 50 according to the requirements in Conditions 43.5.b(i) through 43.5.b(iii). In order for the engine to be considered an emergency stationary ICE, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in Conditions 43.5.b(i) through 43.5.b(iii), is prohibited. If the Permittee does not operate the engine according to the requirements in Conditions 43.5.b(i) through 43.5.b(iii), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.
 - (i) There is no time limit on the use of emergency stationary ICE in emergency situations.
 - (ii) The Permittee may operate EU ID 50 for the purposes specified in Conditions 43.5.b(ii)(A) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition 43.5.b(iii) counts as part of the 100 hours per calendar year allowed by this Condition 43.5.b(ii).
 - (A) EU ID 50 may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

- (iii) EU ID 50 may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in Condition 43.5.b(ii). The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[40 C.F.R. 60.4211(f)(1) – (3), Subpart IIII]

- 43.6. Keep records of the operation of EU ID 50 in emergency and non-emergency service that are recorded through the non-resettable hour meter. Record
 - a. the time of operation of the engine; and
 - b. the reason the engine was in operation during that time.

[40 C.F.R. 60.4214(b), Subpart IIII]

44. NSPS Subpart IIII Reporting. The Permittee shall report as follows:

- 44.1. Include with the operating report required under Condition 95 a copy of the records required in Conditions 43.3, 43.4.b, and 43.6 for the period covered by the report.
- 44.2. Report in accordance with Condition 94 if any of the requirements in Conditions 39 through 43 and 45 was not met.

[18 AAC 50.040 (j)(4) & 50.326(j)]

[40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]

45. NSPS Subpart IIII Deadline for Importing or Installing Stationary CI ICE in Previous Model Years. The Permittee shall comply with the following:

[18 AAC 50.040(a)(2)(OO) & (j)(4) & 50.326(j)]

[40 C.F.R. 71.6(a)(1)]

[40 C.F.R. 60.4200(a)(4), 60.4208(a) – (i), & 60.4216(e), Subpart IIII]

- 45.1. The Permittee shall not install stationary CI ICE units in previous (2007 – 2017) model years after the dates and as specified in 40 C.F.R. 60.4208(a) – (g).

[40 C.F.R. 60.4208(a) - (g), Subpart IIII]

- 45.2. In addition to the requirements specified in 40 C.F.R. 60.4201, 60.4202, 60.4204, and 60.4205, the Permittee shall not import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements and after the dates specified in 40 C.F.R. 60.4208(a) – (g).

[40 C.F.R. 60.4208(h), Subpart IIII]

- 45.3. The requirements of Condition 45 do not apply to stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

[40 C.F.R. 60.4208(i), Subpart IIII]

Subpart KKKK – Turbines

46. NSPS Subpart KKKK Applicability. For EU IDs 1, 2, 32, and 33 listed in Table A, the Permittee shall comply with the applicable requirements for stationary combustion turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005.

46.1. Only heat input to the combustion turbine shall be included when determining whether or not Subpart KKKK is applicable to a turbine. Any additional heat input to associated heat recovery steam generators (HRSG) or duct burners shall not be included when determining the peak heat input.

[18 AAC 50.040(a)(2)(QQ) & (j)(4) and 50.326(j)]

[40 C.F.R. 71.6(a)(1)]

[40 C.F.R. 60.4305(a), Subpart KKKK]

47. NSPS Subpart KKKK GAPCP and General Requirements. The Permittee shall comply with the following:

47.1. Operate and maintain each of EU IDs 1, 2, 32, and 33 and associated air pollution control equipment and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

47.2. When any of EU IDs 1, 2, 32, and 33 is equipped with heat recovery system and utilizes a common steam header with one or more combustion turbines, the Permittee shall either:

- a. Determine compliance with the NO_x emissions limit in Condition 48 by measuring the emissions combined with the emissions from the other unit(s) utilizing the common heat recovery unit; or
- b. Develop, demonstrate, and provide information satisfactory to the Administrator on methods for apportioning the combined gross energy output from the heat recovery unit for each of the affected combustion turbines. The Administrator may approve such demonstrated substitute methods for apportioning the combined gross energy output measured at the steam turbine whenever the demonstration ensures accurate estimation of emissions related under this part.

[18 AAC 50.040(a)(2)(QQ) & (j)(4) and 50.326(j)]

[40 C.F.R. 71.6(a)(1)]

[40 C.F.R. 60.4333(a) & (b), Subpart KKKK]

48. NSPS Subpart KKKK NO_x Standard. For EU IDs 1, 2, 32, and 33 (turbines located north of the Arctic Circle (latitude 66.5 degrees north)), listed in Table A, the Permittee shall meet the NO_x emission limit of 150 ppm at 15 percent O₂ or 1,100 ng/J of useful output (8.7 lb/MWh).

[18 AAC 50.040(j)(4) & 50.326(j)]

[40 C.F.R. 71.6(a)(1)]

[40 C.F.R. 60.4320(a), 60.4325, & Table 1, Subpart KKKK]

49. NSPS Subpart KKKK NO_x MR&R. The Permittee shall monitor, record, and report compliance with the NO_x emissions standards under Condition 48, as follows:

[18 AAC 50.040(a)(2)(QQ) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(a)(3)(i) – (iii)]

49.1. Monitoring. Except as provided by the waiver of Condition 49.1.c, the Permittee shall conduct performance tests in accordance with Condition 49.2 to demonstrate continuous compliance with the NO_x standard in Condition 48 for each of EU IDs 1, 2, 32, and 33, as follows:

- a. If the NO_x emissions result from the performance test is less than or equal to 75 percent of the NO_x emission limit in Condition 48, the Permittee may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test).
- b. If the results of any subsequent performance test exceed 75 percent of the NO_x emission limit in Condition 48, the Permittee must resume annual performance tests (no more than 14 months following the previous performance test) until the requirements in Condition 49.1.a are met.

[40 C.F.R. 60.4340(a) and 60.4400(a) & (b)(1), Subpart KKKK]
[40 C.F.R. 60.8(a), Subpart A]

- c. **Performance Test Waiver.** In each performance test, the Permittee may elect to test only one of the EU IDs 1, 2, 32 (while operating on natural gas), and 33 if the Permittee satisfies the provisions of Conditions 49.1.c(i) through 49.1.c(iii).

- (i) The Permittee shall conduct performance tests under this condition of different turbines, so that at the end of four tests (which may include the initial performance test of 40 C.F.R. 60.8), all four turbines will be tested.
- (ii) In the event any performance test result is greater than 50 percent of the NO_x standard in Condition 48, the Permittee will conduct performance tests on the remaining turbines within 60 days of receiving the final test report. Pursuant to 40 C.F.R. 60.4375(b), a written report of the performance test should be submitted to the EPA Administrator.
- (iii) Once the Permittee has demonstrated that the NO_x performance test for all four of these emissions units is less than or equal to 50 percent of the NO_x standard in Condition 48, the Permittee may continue to use the waiver provided by this Condition 49.1.c.

[40 C.F.R. 60.4340, Subpart KKKK]
[Performance test waiver in Letters from Krishna Viswanathan,
EPA Region 10 to Larry Burgess, eni, 3/15/12 and 4/26/2012]

49.2. Performance Tests. The Permittee shall conduct NO_x performance tests on an annual or bi-annual basis, as specified in Conditions 49.1.a and 49.1.b.

[40 C.F.R. 60.4400(a), Subpart KKKK]

- a. The Permittee may use either one of the two methodologies described below in Condition 49.2.a(i) or 49.2.a(ii) to conduct performance test. For each test run:
- (i) Measure the NO_x concentration (in ppm), using EPA Method 7E or EPA Method 20 in Appendix A of 40 C.F.R 60. For units complying with the output based standard, concurrently measure the stack gas flow rate, using EPA Methods 1 and 2 in Appendix A of 40 C.F.R 60, and measure and record the electrical and thermal output from the unit. Then, use the following equation to calculate the NO_x emission rate:

$$E = \frac{(1.194 \times 10^{-7}) \times (NO_x)_c \times (Q_{std})}{P}$$

Where:

E	=	NO _x emission rate, in lb/MWh
1.194 X 10 ⁻⁷	=	conversion constant, in lb/(dscf-ppm)
NO _x	=	average NO _x concentration for the run, in ppm
Q _{std}	=	stack gas volumetric flow rate, in dcf/hr
P	=	gross electrical and mechanical energy output of the combustion turbine, in MW (for simple-cycle operation), for combined-cycle operation, the sum of all electrical and mechanical output from the combustion and steam turbines, or, for combined heat and power operation, the sum of all electrical and mechanical output from the combustion and steam turbines plus all useful recovered thermal output not used for additional electric or mechanical generation, in MW, calculated according to 40 C.F.R. 60.4350(f)(2); or

- (ii) Measure the NO_x and diluent gas concentrations, using either EPA Methods 7E and 3A, or EPA Method 20 in Appendix A of 40 C.F.R. 60. Concurrently measure the heat input to the unit, using a fuel flow meter(s), and measure the electrical and thermal output of the unit. Use EPA Method 19 in Appendix A of 40 C.F.R. 60 to calculate the NO_x emission rate in lb/MMBtu. Then, use Equations 1 and, if necessary, 2 and 3 in 40 C.F.R. 60.4350(f) to calculate the NO_x emission rate in lb/MWh.

[40 C.F.R. 60.4400(a)(1), Subpart KKKK]

- b. Sampling traverse points for NO_x and (if applicable) diluent gas are to be selected following EPA Method 20 or EPA Method 1 (non-particulate procedures), and sampled for equal time intervals. The sampling must be performed with a traversing single-hole probe, or, if feasible, with a stationary multi-hole probe that samples each of the points sequentially. Alternatively, a multi-hole probe designed and documented to sample equal volumes from each hole may be used to sample simultaneously at the required points.

[40 C.F.R. 60.4400(a)(2), Subpart KKKK]

- c. Notwithstanding Condition 49.2.b, test at fewer points than are specified in EPA Method 1 or EPA Method 20 in Appendix A 40 C.F.R. 60 if the following conditions are met:

- (i) Perform a stratification test for NO_x and diluent pursuant to the procedures specified in Section 6.5.6.1(a) through (e) of Appendix A of 40 C.F.R. 75;
 - (ii) Once the stratification sampling is completed, use the following alternative sample point selection criteria for the performance test:
 - (A) If each of the individual traverse point NO_x concentrations is within ± 10 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ± 5 ppm or ± 0.5 percent CO₂(or O₂) from the mean for all traverse points, then you may use three points (located either 16.7, 50.0 and 83.3 percent of the way across the stack or duct, or, for circular stacks or ducts greater than 2.4 meters (7.8 feet) in diameter, at 0.4, 1.2, and 2.0 meters from the wall). The three points must be located along the measurement line that exhibited the highest average NO_x concentration during the stratification test; or
 - (B) Sample at a single point, located at least 1 meter from the stack wall or at the stack centroid if each of the individual traverse point NO_x concentrations is within ± 5 percent of the mean concentration for all traverse points, or the individual traverse point diluent concentrations differs by no more than ± 3 ppm or ± 0.3 percent CO₂ (or O₂) from the mean for all traverse points.
[40 C.F.R. 60.4400(a)(3), Subpart KKKK]
- d. The Permittee shall conduct performance test, as follows:
 - (i) The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load.
 - (ii) The Permittee may perform testing at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice; and
 - (iii) The Permittee must conduct three separate test runs for each performance test at a minimum time of 20 minutes per run.
[40 C.F.R. 60.4400(b), Subpart KKKK]
- e. For EU ID 32 that combusts both oil and gas as primary or backup fuels, separate performance testing is required for each fuel.
[40 C.F.R. 60.4400(b)(1), Subpart KKKK]
- f. Compliance with the applicable emission limit in Condition 48 must be demonstrated at each tested load level. Compliance is achieved if the three-run arithmetic average NO_x emission rate at each tested level meets the applicable emission limit in Condition 48.
[40 C.F.R. 60.4400(b)(4), Subpart KKKK]

- g. The ambient temperature must be greater than 0 °F during the performance test.

[40 C.F.R. 60.4400(b)(6), Subpart KKKK]

- 49.3. **Recordkeeping.** The Permittee shall keep records of all performance tests data in accordance with Condition 90.

[18 AAC 50.040(j)(4) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(ii) & (c)(6)]

- 49.4. **Reporting.** For EU IDs 1, 2, 32, and 33, the Permittee shall submit a written report of the results of each performance test required under Conditions 49.1 and 49.2 before the close of business on the 60th day following the completion of the performance test and in accordance with Condition 89.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)]
[40 C.F.R. 60.4375(b); Subpart KKKK]

50. **NSPS Subpart KKKK SO₂ Standard.** The Permittee shall not burn in EU IDs 1, 2, 32, and 33 any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 60.4330(a)(2), Subpart KKKK]

51. **NSPS Subpart KKKK SO₂ MR&R.** The Permittee shall monitor, record, and report compliance with the SO₂ standard in Condition 50 as follows:

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(i) – (iii)]

- 51.1. **Monitoring.** Except as provided in Condition 51.1.b, the sulfur content of the fuel must be determined using the total sulfur methods described in Condition 51.2. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, the Permittee may use ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377, which measure the major sulfur compounds.

[40 C.F.R. 60.4360, Subpart KKKK]

- a. The Permittee shall determine the sulfur content of the fuel as follows:

- (i) **Fuel oil.** For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described in Sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of Appendix D to 40 C.F.R. 75 (i.e., flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank).

[40 C.F.R. 60.4370(a), Subpart KKKK]

- (ii) **Gaseous fuel.** For owners and operators that elect not to demonstrate sulfur content using options in Condition 51.1.b, and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day.

[40 C.F.R. 60.4370(b), Subpart KKKK]

- (iii) **Custom schedules.** Notwithstanding the requirements of Condition 51.1.a(ii), operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply, following the procedures set out in 40 C.F.R. 60.4370(c)(1)(i) through (iii) or 60.4370(c)(2).

- (A) The two custom sulfur monitoring schedules set forth in 40 C.F.R. 60.4370(c)(1)(i) through (iv) and 60.4370(c)(2) are acceptable without prior Administrative approval.
- (B) Except as provided in 40 C.F.R. 60.4370(c)(1) and (c)(2), custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in Condition 51.1.a(ii).

[40 C.F.R. 60.4370(c), Subpart KKKK]

- b. The owner or operator may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input. The Permittee shall use one of the following sources of information to make the required demonstration:

- (i) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content of the fuel is as follows:
 - (A) 0.05 weight percent (500 ppmw) or less for fuel oil; and
 - (B) 20.0 grains/100 scf or less for natural gas; or
- (ii) Representative fuel sampling data, which show that the sulfur content of the fuel does not exceed 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input. At a minimum, the amount of fuel sampling data specified in 40 C.F.R. 75, Appendix D, Section 2.3.1.4 or 2.3.2.4 is required.

[40 C.F.R. 60.4365, Subpart KKKK]

- 51.2. **Test Methods and Procedures.** If the Permittee is required under Condition 51.1.a(i) or 51.1.a(iii) to periodically determine the sulfur content of the fuel combusted in the turbine, the Permittee shall comply with the following:

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 60.4415(a)(1), Subpart KKKK]

- a. Collect a representative fuel sample following ASTM D5287 for natural gas or ASTM D4177 for fuel oil. Alternatively, for fuel oil, follow the procedures for manual pipeline sampling in Section 14 of ASTM D4057.
- b. Analyze the samples for the total sulfur content of the fuel using:
 - (i) ASTM D129, or alternatively D1266, D1552, D2622, D4294, or D5453 for liquid fuels; or
[40 C.F.R. 60.4415(a)(1)(i), Subpart KKKK]
 - (ii) ASTM D1072, or alternatively D3246, D4084, D4468, D4810, D6228, D6667, or Gas Processors Association Standard 2377 for gaseous fuels.
[40 C.F.R. 60.4415(a)(ii), Subpart KKKK]
- c. The fuel analyses required under Condition 51.2 may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency and shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test).
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 60.4415(a) & (a)(1), Subpart KKKK]

51.3. **Recordkeeping.** Keep records as required by Conditions 51.1 and 51.2, and in accordance with Condition 90.

[18 AAC 50.040(j)(4) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(3)(ii) & (c)(6)]

51.4. **Reporting.** For each affected emissions unit that periodically determines the fuel sulfur content under Condition 51.1, the Permittee shall submit reports of excess emissions and monitor downtime²⁰, in accordance with 40 C.F.R. 60.7(c) as summarized in Condition 32, except where otherwise approved by a custom fuel monitoring schedule. Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)]
[40 C.F.R. 60.4375(a), Subpart KKKK]

40 C.F.R. Part 63 National Emission Standards for Hazardous Air Pollutants (NESHAP)

Subpart A – General Provisions

52. **NESHAP Subpart A.** The Permittee shall comply with the applicable requirements of 40 C.F.R. 63 Subpart A in accordance with the provisions for applicability of Subpart A in

52.1. Table 8 to Subpart ZZZZ for EU IDs 68 and 116; and

52.2. Table 3 to Subpart CCCCCC for EU ID 118.

[18 AAC 50.040(c)(1), (23), & (35), 50.040(j)(4), and 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 63.1-63.15, Subpart A]

²⁰ Excess emissions and monitor downtime for SO₂ are as defined in 40 C.F.R. 60.4385.

[40 C.F.R. 63.6665 & Table 8, Subpart ZZZZ]
[40 C.F.R. 63.11130 & Table 3, Subpart CCCCCC]

NESHAP Subpart ZZZZ²¹ – Reciprocating Internal Combustion Engines

53. NESHAPs Subpart ZZZZ Applicability. The Permittee shall comply with applicable requirements for existing²² (EU IDs 68 and 116) and new²³ (EU IDs 3, 47, 49, 50, 64, and 93) stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions.

53.1. For EU IDs 68 and 116, existing stationary RICE units, the Permittee shall at all times comply with Conditions 54 through 57.

53.2. For EU IDs 3, 47, 49, 50, 64, and 93, new stationary RICE units, the Permittee shall meet the requirements of 40 C.F.R. 63 Subpart ZZZZ by meeting the requirements of 40 C.F.R. 60 Subpart IIII in Conditions 39 through 45. No further requirements apply for such engines under 40 C.F.R. 63.

[18 AAC 50.040(c)(23), 50.040(j)(4), and 50.326(j)]
40 C.F.R. 71.6((a)(1)

[40 C.F.R. 63.6585(c), 63.6590(a)(1)(iii), (a)(2)(iii) & (c)(i), and 63.6605(a), Subpart ZZZZ]

54. NESHAPs Subpart ZZZZ GAPCP, Operation and Maintenance Requirements. The Permittee shall comply with the following:

[18 AAC 50.040(c)(23) & (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1) & (3)(i)]

54.1. At all times, operate and maintain EU IDs 68 and 116 listed in Table A, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of EU IDs 68 and 116.

[40 C.F.R. 63.6605(b), Subpart ZZZZ]

54.2. The Permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to either:

- a. the manufacturer's emission-related written instructions for operation and maintenance; or

²¹ The provisions of NESHAP Subpart ZZZZ listed in Conditions 53 through 57 are current as amended through February 27, 2014. Should EPA promulgate revisions to this subpart, the Permittee shall be subject to the revised final provisions as promulgated and not the superseded provisions summarized in these conditions.

²² In accordance with 40 C.F.R. 63.6590(a)(1)(iii), a stationary RICE located at an area source of HAP emissions is *existing* if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

²³ In accordance with 40 C.F.R. 63.6590(a)(2)(iii), a stationary RICE located at an area source of HAP emissions is *new* if you commenced construction of the stationary RICE on or after June 12, 2006.

- b. a maintenance plan developed by the Permittee which must provide, to the extent practicable, for the maintenance and operation of the engine(s) in a manner consistent with good air pollution control practice for minimizing emissions.

[40 C.F.R. 63.6625(e)(4), 63.6640(a) & Table 6 (item 9), Subpart ZZZZ]

- 54.3. Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

[40 C.F.R. 63.6625(h) & Table 2d (item 1), Subpart ZZZZ]

55. NESHAP Subpart ZZZZ Work and Management Practices Standards. For EU IDs 68 and 116, the Permittee shall comply with the following work and management practices:

[18 AAC 50.040(c)(23) & (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(1) & (3)(i)]

- 55.1. Except during periods of startup, the Permittee shall meet the following requirements:

- a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first, except as allowed by Condition 55.4;
- b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
- c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

[40 C.F.R. 63.6603(b)(1) & Table 2d (item 1), Subpart ZZZZ]

- 55.2. During periods of startup, the Permittee shall comply with Condition 54.3.

[40 C.F.R. 63.6603(b) & Table 2d (item 1 & Footnote 1), Subpart ZZZZ]

- 55.3. Demonstrate continuous compliance with the requirements in Conditions 55.1 and 55.2 by complying with Condition 54.2.

[40 C.F.R. 63.6640(a) & Table 6 (item 9), Subpart ZZZZ]

- 55.4. The Permittee has the option to utilize an oil analysis program in order to extend the specified oil change requirement in Condition 55.1.a, as described below:

- a. The oil analysis must be performed at the same frequency specified for changing the oil in 55.1.a.
- b. The analysis program must, at a minimum, analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows:
 - (i) Total Base Number is less than 30 percent of the Total Base Number of the oil when new;
 - (ii) viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or
 - (iii) percent water content (by volume) is greater than 0.5.

- c. If all of the condemning limits in Conditions 55.4.b(i) through 55.4.b(iii) are not exceeded, the Permittee is not required to change the oil.
- d. If any of the limits in Conditions 55.4.b(i) through 55.4.b(iii) is exceeded, the Permittee must change the oil within 2 business days of receiving the results of the analysis.
 - (i) If the engine is not in operation when the results of the analysis are received, the Permittee must change the oil within 2 business days or before commencing operation, whichever is later.
- e. The analysis program must be part of the maintenance plan for the engine.

[40 C.F.R. 63.6625(i) & Table 2d (Footnote 1), Subpart ZZZZ]

56. NESHAP Subpart ZZZZ Recordkeeping Requirements. The Permittee shall keep records, as follows:

[18 AAC 50.040(c)(23) & (j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a) (3)(ii)]

- 56.1. If electing to operate and maintain EU IDs 68 and 116 according to a maintenance plan developed by the Permittee as allowed under Condition 54.2.b, keep records of the maintenance conducted on EU IDs 68 and 116 in order to demonstrate that the stationary RICE and after-treatment control device (if any) are operated and maintained according to the maintenance plan.

[40 C.F.R. 63.6655(e)(3), Subpart ZZZZ]

- 56.2. If electing to utilize the oil analysis program described in Condition 55.4, keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine.

[40 C.F.R. 63.6625(i), Subpart ZZZZ]

- 56.3. Keep records in a form suitable and readily available for expeditious review. Keep each record in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 C.F.R. 63.10(b)(1), except that all records may be retained off site.

[40 C.F.R. 63.6660 & Table 8, Subpart ZZZZ]
[40 C.F.R. 63.10(b)(1), Subpart A]

57. NESHAP Subpart ZZZZ Reporting Requirements. The Permittee shall report, as follows:

[18 AAC 50.040(c)(23) & (j)(4) and 50.326(j)]
[40 C.F.R. 71.6(c)(3)(iii) & (c)(6)]

- 57.1. Include in the operating report required by Condition 95 a report of all deviations as defined in 40 C.F.R. 63.6675 and of each instance in which an applicable requirement in 40 C.F.R. 63, Subpart A (Table 8 to Subpart ZZZZ) was not met.

[40 C.F.R. 63.6640(e) & 63.6650(f), Subpart ZZZZ]

- 57.2. Notify the Department in accordance with Condition 94 if any of the requirements in Conditions 53 through 57 were not met.

[18 AAC 50.040(j)(4) and 50.326(j)(4)]

[40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]

Subpart CCCCCC – Gasoline Dispensing Facilities (GDF)

- 58. NESHAP Subpart CCCCCC Applicability.** The Permittee shall upon startup comply with applicable requirements for a gasoline storage tank (EU ID 118) as a new GDF with a monthly throughput²⁴ of greater than 10,000 gallons but less than 100,000 gallons of gasoline located at an area source of HAP emissions.

[18 AAC 50.040(c)(35) & (j)(4) and 50.326(j)]
40 C.F.R. 71.6((a)(1)

[40 C.F.R. 63.11111(a), (c) & (h); 63.11112(a) & (b); and 63.11113(a)(2), Subpart CCCCCC]

- 58.1. The Permittee shall, upon request by the Administrator, demonstrate that the monthly throughput for EU ID 118 is less than the 100,000-gallon threshold level. Keep records for a period of 5 years, to document monthly throughput beginning upon startup of EU ID 118.

[40 C.F.R. 63.11111(e), Subpart CCCCCC]

- 59. NESHAP Subpart CCCCCC GAPCP.** For EU ID 118 listed in Table A, the Permittee shall comply with the following:

[18 AAC 50.040(c)(35) & (j)(4) and 50.326(j)]
40 C.F.R. 71.6((a)(1)

- 59.1. At all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

- 59.2. Keep applicable records and submit reports as specified in Conditions 61 and 62.

[40 C.F.R. 63.11115(a) & (b), Subpart CCCCCC]

- 60. NESHAP Subpart CCCCCC Work and Management Practice Standards.** The Permittee shall comply with the following work and management practice standards, as applicable for the monthly throughput of EU ID 118:

[18 AAC 50.040(c)(35) & (j)(4) and 50.326(j)]
40 C.F.R. 71.6((a)(1) & (3)

- 60.1. If EU ID 118 has a monthly throughput of less than 10,000 gallons of gasoline, comply with the requirements in 40 C.F.R. 63.11116, as follows:

[40 C.F.R. 63.11111(b), Subpart CCCCCC]

- a. Do not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

²⁴ *Monthly throughput* is the total volume of gasoline loaded into, or dispensed from, all the gasoline storage tanks located at a single affected GDF. If an area source has two or more GDF at separate locations within the area source, each GDF is treated as a separate affected source. [40 C.F.R. 63.11111(h), Subpart CCCCCC].

- (i) Minimize gasoline spills;
- (ii) Clean up spills as expeditiously as practicable;
- (iii) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
- (iv) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.
- (v) Have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

[40 C.F.R. 63.11116(a)(1) – (4) & (b), Subpart CCCCCC]

60.2. If EU ID 118 has a monthly throughput of 10,000 gallons of gasoline or more, comply with the requirements in 40 C.F.R. 63.11117, as follows:

[40 C.F.R. 63.11111(c), Subpart CCCCCC]

- a. Comply with Condition 60.1.a.
- b. Only load gasoline into the storage tank by utilizing submerged filling,²⁵ as specified in Conditions 60.2.b(i) and 60.2.b(ii).
 - (i) Submerged fill pipes must be no more than 6 inches from the bottom of the tank. The 6 inches required distance shall be measured from the point in the opening of the submerged fill pipe that is the greatest distance from the bottom of the storage tank.
 - (ii) Submerged fill pipes not meeting the specifications of Condition 60.2.b(i) are allowed if the owner or operator can demonstrate that the liquid level in the tank is always above the entire opening of the fill pipe. Documentation providing such demonstration must be made available for inspection by the Administrator's delegated representative during the course of a site visit.

[40 C.F.R. 63.11117(a), (b)(2) – (3) & (d), Subpart CCCCCC]

60.3. If the throughput of EU ID 118 equals or exceeds the 100,000 gallons monthly throughput threshold, EU ID 118 will remain subject to the requirements in 40 C.F.R. 63.11118, even if the throughput later falls below the applicable throughput threshold.

[40 C.F.R. 63.11111(i), Subpart CCCCCC]

- a. Comply with Conditions 60.1.a and 60.2.b.

²⁵ *Submerged filling* means, for the purposes of this subpart, the filling of a gasoline storage tank through a submerged fill pipe whose discharge is no more than the applicable distance specified in Conditions 60.2.b(i) and 60.2.b(ii) from the bottom of the tank. Bottom filling of gasoline storage tanks is included in this definition. [40 C.F.R. 63.11132]

- b. Comply with the applicable requirements of 40 C.F.R. 63.11118 and all associated management practices, testing, monitoring, recordkeeping, notifications, and reporting requirements.

[40 C.F.R. 63.11118, 63.11120, and 63.11124 – 63.11126, Subpart CCCCCC]

- 60.4. Comply with Condition 60.1.a when dispensing gasoline from a fixed gasoline storage tank at a GDF into a portable gasoline tank for the on-site delivery and subsequent dispensing of the gasoline into the fuel tank of a motor vehicle or other gasoline-fueled engine or equipment used within the stationary source.

[40 C.F.R. 63.11111(j), Subpart CCCCCC]

61. NESHAP Subpart CCCCCC Recordkeeping Requirements. The Permittee shall keep records as follows:

[18 AAC 50.040(c)(35) & (j)(4) and 50.326(j)]
40 C.F.R. 71.6((a)(3)(ii))

- 61.1. Keep records to document monthly throughput beginning upon startup of EU ID 118.
- 61.2. Keep records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.
- 61.3. Keep records of actions taken during periods of malfunction to minimize emissions in accordance with Condition 59.1, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
- 61.4. Keep records for a period of five (5) years.

[40 C.F.R. 63.11111(e) and 63.11125(d), Subpart CCCCCC]

62. NESHAP Subpart CCCCCC Reporting Requirements. The Permittee shall report as follows:

[18 AAC 50.040(c)(35) & (j)(4) and 50.326(j)]
40 C.F.R. 71.6((a)(3)(iii))

- 62.1. By March 15 of each year, report to the Administrator the following:
 - a. number, duration, and a brief description of each type of malfunction which occurred during the previous calendar year and which caused or may have caused any applicable emission limitation to be exceeded; and
 - b. a description of actions taken during a malfunction of an affected source to minimize emissions in accordance with Condition 59.1, including actions taken to correct a malfunction.

- 62.2. No report is necessary for a calendar year in which no malfunctions occurred.

[40 C.F.R. 63.11126(b), Subpart CCCCCC]

- 62.3. Report as a permit deviation in accordance with Condition 94 should EU ID 118 reach the 100,000 gallons monthly throughput threshold.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]

40 C.F.R. Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAP)

Subpart A – General Provisions & Subpart M – Asbestos

- 63.** The Permittee shall comply with the applicable requirements set forth in 40 C.F.R. 61.145, 61.150, and 61.152 of Subpart M, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(1) & (2)(F), & 50.326(j)]
[40 C.F.R. 61, Subparts A & M, & Appendix A]

40 C.F.R. Part 82 Protection of Stratospheric Ozone

- 64. Subpart F – Recycling and Emissions Reduction.** The Permittee shall comply with the applicable standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F.

[18 AAC 50.040(d) & 50.326(j)]
[40 C.F.R. 82, Subpart F]

- 65. Subpart G – Significant New Alternatives.** The Permittee shall comply with the applicable prohibitions set out in 40 C.F.R. 82.174 (Protection of Stratospheric Ozone Subpart G – Significant New Alternatives Policy Program).

[18 AAC 50.040(d) & 50.326(j)]
[40 C.F.R. 82.174(b) - (d), Subpart G]

- 66. Subpart H – Halons Emissions Reduction.** The Permittee shall comply with the applicable prohibitions set out in 40 C.F.R. 82.270 (Protection of Stratospheric Ozone Subpart H – Halon Emission Reduction).

[18 AAC 50.040(d) & 50.326(j)]
[40 C.F.R. 82.270(b) - (f), Subpart H]

General NSPS and NESHAP Requirements

- 67. NESHAP Applicability Determinations.** The Permittee shall determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 C.F.R. 63) in accordance with the procedures described in 40 C.F.R. 63.1(b).

- 67.1. If an owner or operator of a stationary source who is in the relevant source category determines that the source is not subject to a relevant standard or other requirement established under 40 C.F.R. 63, the owner or operator must keep a record as specified in 40 C.F.R. 63.10(b)(3).
- 67.2. If a source becomes affected by an applicable subpart of 40 C.F.R. 63, the owner or operator shall comply with such standard by the compliance date established by the Administrator in the applicable subpart, in accordance with 40 C.F.R. 63.6(c).
- 67.3. After the effective date of any relevant standard promulgated by the Administrator under this part, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator and the Department of the intended construction or reconstruction. The notification must be submitted in accordance with the procedures in 40 C.F.R. 63.9(b).

[18 AAC 50.040(c)(1), 50.040(j), & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(ii)]
[40 C.F.R. 63.1(b), 63.5(b)(4), 63.6(c)(1), 63.9(b), & 63.10(b)(3), Subpart A]

Section 6. General Conditions

Standard Terms and Conditions

- 68.** Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.

[18 AAC 50.326(j)(3), 50.345(a) & (e)]

- 69.** The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and re-issuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

[18 AAC 50.326(j)(3), 50.345(a) & (f)]

- 70.** The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.326(j)(3), 50.345(a) & (g)]

- 71. Administration Fees.** The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-403.

[18 AAC 50.326(j)(1), 50.400, & 50.403]
[AS 37.10.052(b), 11/04; AS 46.14.240, 6/7/03]

- 72. Assessable Emissions.** The Permittee shall pay to the Department annual emission fees based on the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities 10 tons per year or greater. The quantity for which fees will be assessed is the lesser of

72.1. the stationary source's assessable potential to emit of 644 TPY; or

72.2. the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon credible evidence of actual annual emissions emitted during the most recent calendar year or another 12-month period approved in writing by the Department, when demonstrated by the most representative of one or more of the following methods:

- a. an enforceable test method described in 18 AAC 50.220;
- b. material balance calculations;
- c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
- d. other methods and calculations approved by the Department, including appropriate vendor-provided emissions factors when sufficient documentation is provided.

[18 AAC 50.040(j)(3), 50.035, 50.326(j)(1), 50.346(b)(1), 50.410, & 50.420]
[40 C.F.R. 71.5(c)(3)(ii)]

- 73. Assessable Emission Estimates.** Emission fees will be assessed as follows:

- 73.1. No later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions via the Department's Air Online Services (AOS) System at <http://dec.alaska.gov/applications/air/airtoolsweb> using the Permittee Portal option and filling out the Emission Fee Estimate form. Alternatively, the report may be submitted by:
- a. E-mail under a cover letter using dec.aq.airreports@alaska.gov; or
 - b. hard copy to the following address: ADEC Air Permits Program, ATTN: Assessable Emissions Estimate, 555 Cordova Street, Anchorage, Alaska 99501.
- 73.2. The Permittee shall include with the assessable emissions report all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates.
- 73.3. If no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set out in Condition 72.1.
- [18 AAC 50.040(j)(3), 50.326(j)(1), 50.346(b)(1), 50.410, & 50.420]
[40 C.F.R. 71.5(c)(3)(ii)]
- 74. Good Air Pollution Control Practice.** The Permittee shall do the following for EU IDs 4, 9 through 20, 23, 24, 69 through 71, 74, 75, 78, 94 through 105, 107 through 110, 111, 112, 114, 115, 117, and 123 through 125:
- 74.1. perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;
 - 74.2. keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and
 - 74.3. keep a copy of either the manufacturer's or the operator's maintenance procedures.
- [18 AAC 50.326(j)(3), & 50.346(b)(5)]
- 75. Dilution.** The Permittee shall not dilute emissions with air to comply with this permit. Monitoring shall consist of an annual certification that the Permittee does not dilute emissions to comply with this permit.
- [18 AAC 50.045(a)]
- 76. Reasonable Precautions to Prevent Fugitive Dust.** A person who causes or permits bulk materials to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air.
- 76.1. The Permittee shall keep records of:
- a. complaints received by the Permittee and complaints received by the Department and conveyed to the Permittee; and
 - b. any additional precautions that are taken
 - (i) to address complaints described in Condition 76.1.a or to address the results of Department inspections that found potential problems; and

(ii) to prevent future dust problems.

76.2. The Permittee shall report according to Conditions 78.4 and 78.5.

[18 AAC 50.045(d), 50.040(e), 50.326(j)(3), & 50.346(c)]

77. Stack Injection. The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a stationary source constructed or modified after November 1, 1982, except as authorized by a construction permit, Title V permit, or air quality control permit issued before October 1, 2004.

[18 AAC 50.055(g)]

78. Air Pollution Prohibited. No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.110, 50.040(e), 50.326(j)(3), & 50.346(a)]

[40 C.F.R. 71.6(a)(3)]

78.1. Monitoring, Recordkeeping, and Reporting:

- a. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 94.
- b. As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 78.

78.2. The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

- a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 78; or
- b. the Department notifies the Permittee that it has found a violation of Condition 78.

78.3. The Permittee shall keep records of

- a. the date, time, and nature of all emissions complaints received;
- b. the name of the person or persons that complained, if known;
- c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 78; and
- d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.

78.4. With each stationary source operating report under Condition 95, the Permittee shall include a brief summary report which must include

- a. the number of complaints received;
 - b. the number of times the Permittee or the Department found corrective action necessary;
 - c. the number of times action was taken on a complaint within 24 hours; and
 - d. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.
- 78.5. The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.
- 79. Technology-Based Emission Standard.** If an unavoidable emergency, malfunction (as defined in 18 AAC 50.235(d)), or non-routine repair (as defined in 18 AAC 50.990(64)), causes emissions in excess of a technology-based emission standard²⁶ listed in Conditions 41, 42, 48, 50, and 64 the Permittee shall
- 79.1. take all reasonable steps to minimize levels of emissions that exceed the standard; and
 - 79.2. report in accordance with Condition 94.1.b; the report must include information on the steps taken to mitigate emissions and corrective measures taken or to be taken.
- [18 AAC 50.235(a), 50.326(j)(4), & 50.040(j)(4)]
[40 C.F.R. 71.6(c)(6)]

Open Burning Requirements

- 80. Open Burning.** If the Permittee conducts open burning at this stationary source, the Permittee shall comply with the requirements of 18 AAC 50.065. The Permittee shall comply as follows:
- 80.1. Keep written records to demonstrate that the Permittee complies with the limitations in this condition and the requirements of 18 AAC 50.065. Upon request by the Department, submit copies of the records; and
 - 80.2. Include this condition in the annual certification required under Condition 96.
- [18 AAC 50.065, 50.040(j), & 50.326(j)]
[40 C.F.R. 71.6(a)(3)]

²⁶ As defined in 18 AAC 50.990(106), the term “*technology-based emission standard*” means a best available control technology (BACT) standard; a lowest achievable emission rate (LAER) standard; a maximum achievable control technology (MACT) standard established under 40 C.F.R. 63, Subpart B, adopted by reference in 18 AAC 50.040(c); a standard adopted by reference in 18 AAC 50.040(a) or (c); and any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

Section 7. General Source Testing and Monitoring Requirements

- 81. Requested Source Tests.** In addition to any source testing explicitly required by the permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a) & 50.345(a) & (k)]

- 82. Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing

[18 AAC 50.220(b)]

- 82.1. at a point or points that characterize the actual discharge into the ambient air; and
- 82.2. at the maximum rated burning or operating capacity of the emissions unit or another rate determined by the Department to characterize the actual discharge into the ambient air.

- 83. Reference Test Methods.** The Permittee shall use the following as test methods when conducting source testing for compliance with this permit:

- 83.1. Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.220(c)(1)(A) & 50.040(a)]
[40 C.F.R. 60]

- 83.2. Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.

[18 AAC 50.040(c) & 50.220(c)(1)(C)]
[40 C.F.R. 63]

- 83.3. Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Method 9. The Permittee may use the form in Section 12 to record data.

[18 AAC 50.030 & 50.220(c)(1)(D)]

- 83.4. Source testing for emissions of total particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.

[18 AAC 50.040(a)(3) & 50.220(c)(1)(E)]
[40 C.F.R. 60, Appendix A]

- 83.5. Source testing for emissions of PM₁₀ and PM_{2.5} must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.

[18 AAC 50.035(b)(2) & 50.220(c)(1)(F)]
[40 C.F.R. 51, Appendix M]

- 83.6. Source testing for emissions of any pollutant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.

[18 AAC 50.040(c)(32) & 50.220(c)(2)]
[40 C.F.R. 63, Appendix A, Method 301]

- 84. Excess Air Requirements.** To determine compliance with this permit, standard exhaust gas volumes must include only the volume of gases formed from the theoretical combustion of the fuel, plus the excess air volume normal for the specific emissions unit type, corrected to standard conditions (dry gas at 68° F and an absolute pressure of 760 millimeters of mercury).

[18 AAC 50.220(c)(3) & 50.990(102)]

- 85. Test Exemption.** The Permittee is not required to comply with Conditions 87, 88 and 89 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 2.4), or under Condition 5, 6, or 14.3, or Smoke/No Smoke Plan (Condition 2.5).

[18 AAC 50.345(a)]
[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)]

- 86. Test Deadline Extension.** The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee.

[18 AAC 50.345(a) & (l)]

- 87. Test Plans.** Except as provided in Condition 85, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the emissions unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under Condition 81 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be done without resubmitting the plan.

[18 AAC 50.345(a) & (m)]

- 88. Test Notification.** Except as provided in Condition 85, at least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin.

[18 AAC 50.345(a) & (n)]

- 89. Test Reports.** Except as provided in Condition 85, within 60 days after completing a source test, the Permittee shall submit one certified copy of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall additionally certify the results in the manner set out in Condition 91. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.

[18 AAC 50.345(a) & (o)]

Section 8. General Recordkeeping and Reporting Requirements

- 90.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

[18 AAC 50.326(j)]
[40 C.F.R 60.7(f), Subpart A, 40 C.F.R 71.6(a)(3)(ii)(B)]

- 90.1. Copies of all reports and certifications submitted pursuant to this section of the permit; and
- 90.2. Records of all monitoring required by this permit, and information about the monitoring including:
 - a. the date, place, and time of sampling or measurements;
 - b. the date(s) analyses were performed;
 - c. the company or entity that performed the analyses;
 - d. the analytical techniques or methods used;
 - e. the results of such analyses; and,
 - f. the operating conditions as existing at the time of sampling or measurement.

Reporting Requirements

- 91. Certification.** The Permittee shall certify any permit application, report, affirmation, or compliance certification submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: *“Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.”* Excess emission reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.

- 91.1. The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if
 - a. a certifying authority registered under AS 09.80.020 verifies that the electronic signature is authentic; and
 - b. the person providing the electronic signature has made an agreement, with the certifying authority described in Condition 91.1.a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.

[18 AAC 50.345(a) & (j), 50.205, & 50.326(j)(3)]

- 92. Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall submit one certified copy of reports, compliance certifications, and/or other submittals required by this permit. The Permittee may submit the documents by hard copy or electronically, as follows:

- 92.1. Submit hard copy to the following address: ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician.
- 92.2. Provide electronic submittals either by:
 - a. using the Department's Air Online Services (AOS) system at <http://dec.alaska.gov/applications/air/airtoolsweb/> using the Permittee Portal option; or
 - b. an email, under a cover letter, addressed to dec.aq.airreports@alaska.gov.

[18 AAC 040(j)(4) & 50.326(j)(4)]
[40 C.F.R. 71.6(c)(6)]

- 93. Information Requests.** The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the Federal Administrator.

[18 AAC 50.345(a) & (i), 50.200, & 50.326(a) & (j)]
[40 C.F.R. 71.5(a)(2) & 71.6(a)(3)]

94. Excess Emissions and Permit Deviation Reports.

- 94.1. Except as provided in Condition 78, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:
 - a. In accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report
 - (i) emissions that present a potential threat to human health or safety; and
 - (ii) excess emissions that the Permittee believes to be unavoidable;
 - b. In accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology based emission standard;
 - c. Report all other excess emissions and permit deviations
 - (i) within 30 days of the end of the month in which the emissions or deviation occurred, except as provided in Conditions 94.1.c(ii) and 94.1.c(iii);
 - (ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 94.1.c(i); and
 - (iii) according to the required deadline for failure to monitor, as required in Conditions 4.2.b and 10.1.b.

- 94.2. When reporting either excess emissions or permit deviations, the Permittee shall report using either the Department's online form, which can be found at <http://dec.alaska.gov/applications/air/airtoolsweb> using the Permittee Portal option, or if the Permittee prefers, the form contained in Section 13 of this permit. The Permittee must provide all information called for by the form that is used.
- 94.3. If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

[18 AAC 50.235(a)(2), 50.240(c), 50.326(j)(3), & 50.346(b)(2) & (3)]

95. Operating Reports. During the life of this permit²⁷, the Permittee shall submit to the Department an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.

- 95.1. The operating report must include all information required to be in operating reports by other conditions of this permit, for the period covered by the report.
- 95.2. When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 95.1, the Permittee shall identify
- a. the date of the deviation;
 - b. the equipment involved;
 - c. the permit condition affected;
 - d. a description of the excess emissions or permit deviation; and
 - e. any corrective action or preventive measures taken and the date(s) of such actions; or
- 95.3. When excess emissions or permit deviations have already been reported under Condition 94 the Permittee shall cite the date or dates of those reports.
- 95.4. The operating report shall include, for the period covered by the report, a listing of emissions monitored under Conditions 2.4.e, 2.5.c, 8.2, 11.1, 14.2, 49.1.b, and 60.3, which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report.
- a. the date of the emissions;
 - b. the equipment involved;
 - c. the permit condition affected; and
 - d. the monitoring result which triggered the additional monitoring.
- 95.5. **Transition from expired to renewed permit.** For the first period of this renewed operating permit, also provide the previous permit's operating report elements

²⁷ *Life of this permit* is defined as the permit effective dates, including any periods of reporting obligations that extend beyond the permit effective dates. For example if a permit expires prior to the end of a calendar year, there is still a reporting obligation to provide operating reports for the periods when the permit was in effect.

covering that partial period immediately preceding the effective date of this renewed permit.

[18 AAC 50.346(a) & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)(A)]

96. Annual Compliance Certification. Each year by March 31, the Permittee shall compile and submit to the Department an annual compliance certification report according to Condition 92.

96.1. Certify the compliance status of the stationary source over the preceding calendar year consistent with the monitoring required by this permit, as follows:

- a. identify each term or condition set forth in Conditions Section 3 through Section 10, that is the basis of the certification;
- b. briefly describe each method used to determine the compliance status;
- c. state whether compliance is intermittent or continuous; and
- d. identify each deviation and take it into account in the compliance certification;

96.2. **Transition from expired to renewed permit.** For the first period of this renewed operating permit, also provide the previous permit's annual compliance certification report elements covering that partial period immediately preceding the effective date of this renewed permit.

96.3. In addition, submit a copy of the report directly to the Clean Air Act Compliance Manager, US EPA Region 10, Mail Stop: OCE-101, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101.

[18 AAC 50.205, 50.345(a) & (j), & 50.326(j)]
[40 C.F.R. 71.6(c)(5)]

97. Emission Inventory Reporting. The Permittee shall submit to the Department reports of actual emissions for the previous calendar year, by emissions unit, of CO, NH₃, NO_x, PM₁₀, PM_{2.5}, SO₂, VOC, and lead (Pb) (and lead compounds) using the form in Section 14 of this permit, as follows:

97.1. Each year by April 30, if the stationary source's potential to emit for the previous calendar year equals or exceeds:

- a. 250 TPY of NH₃, PM₁₀, PM_{2.5} or VOCs; or
- b. 2,500 TPY of CO, NO_x or SO₂.

97.2. Every third year by April 30, if the stationary source's potential to emit for the previous calendar year (except actual emissions for Pb) equals or exceeds:

- a. 0.5 TPY of actual Pb, or
- b. 1,000 TPY of CO; or
- c. 100 TPY of SO₂, NH₃, PM₁₀, PM_{2.5}, NO_x or VOCs.

- 97.3. For reporting under Condition 97.2, the Permittee shall report in 2021 for calendar year 2020, 2024 for calendar year 2023, etc., in accordance with the Environmental Protection Agency schedule.
- 97.4. Include in the report required by this condition, the required data elements contained within the form in Section 14 or those contained in Tables 2a and 2b of Appendix A to Subpart A of 40 C.F.R. 51 and Emission Inventory Instructions available in Air Online Services (AOS) system for each emissions unit.
- a. Submit the report through electronic online submission via the Department's AOS system at <http://dec.alaska.gov/applications/air/airtoolsweb> using the Permittee Portal option.
 - b. If the AOS system is not available, the report may be submitted by
 - (i) email using dec.aq.airreports@alaska.gov; or
 - (ii) hard copy to the following address: ADEC Air Permits Program, ATTN: Emissions Inventory, 555 Cordova Street, Anchorage, Alaska 99501; or
 - (iii) facsimile at 907-269-7508.

[18 AAC 50.040(j)(4), 50.200, & 50.346(b)(8) & (9)]

[40 C.F.R. 51.15, 51.30(a)(1) & (b)(1), & 40 C.F.R. 51, Appendix A to Subpart A]

98. NSPS and NESHAP Reports. The Permittee shall comply with the following:

- 98.1. **Reports:** Except for previously submitted reports and federal reports and notices submitted through EPA's Central Data Exchange (CDX) and Compliance and Emissions Data Reporting Interface (CEDRI) online reporting system, attach to the operating report required by Condition 95 for the period covered by the report, a copy of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10. For reports previously submitted to ADEC or submitted through CDX/CEDRI, state in the operating report the date and a brief description of each of the reports submitted during the reporting period; and
- 98.2. **Waivers:** Upon request by the Department, provide a written copy of any EPA-granted alternative monitoring requirement, custom monitoring schedule or waiver of the federal emission standards, recordkeeping, monitoring, performance testing, or reporting requirements. The Permittee shall keep a copy of each U.S. EPA-issued monitoring waiver or custom monitoring schedule with the permit.

[18 AAC 50.326(j)(4) & 50.040(j)]

[40 C.F.R. 60.13, 63.10(d) & (f) & 40 C.F.R. 71.6(c)(6)]

Section 9. Permit Changes and Renewal

99. Permit Applications and Submittals. The Permittee shall comply with the following requirements for submitting application information to the US Environmental Protection Agency (EPA):

- 99.1. The Permittee shall provide a copy of each application for modification or renewal of this permit, including any compliance plan, or application addenda, at the time the application or addendum is submitted to the Department;
- 99.2. The information shall be submitted to Part 70 Operating Permit Program, US EPA Region 10, Mail Stop: OAW-150, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101;
- 99.3. To the extent practicable, the Permittee shall provide to EPA applications in portable document format (pdf); MS Word format (.doc), or other computer-readable format compatible with EPA's national database management system; and
- 99.4. The Permittee shall maintain records as necessary to demonstrate compliance with this condition.

[18 AAC 50.040(j)(7) & 50.326(a) & (j)(3), and 50.346(b)(7)]
[40 C.F.R. 71.10(d)(1)]

100. Emissions Trading. No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(8)]

101. Off Permit Changes. The Permittee may make changes that are not addressed or prohibited by this permit other than those subject to the requirements of 40 C.F.R. Parts 72 through 78 or those that are modifications under any provision of Title I of the Act to be made without a permit revision, provided that the following requirements are met:

- 101.1. Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition;
- 101.2. Provide contemporaneous written notice to EPA and the Department of each such change, except for changes that qualify as insignificant under 18 AAC 50.326(d) – (i). Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change;
- 101.3. The change shall not qualify for the shield under 40 C.F.R. 71.6(f);
- 101.4. The Permittee shall keep a record describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(12)]

102. Operational Flexibility. The Permittee may make CAA Section 502(b)(10)²⁸ changes within the permitted stationary source without requiring a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions).

102.1. The Permittee shall provide EPA and the Department with a written notification no less than seven days in advance of the proposed change.

102.2. For each such change, the notification required by Condition 102.1 shall include a brief description of the change within the permitted stationary source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

102.3. The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to Condition 102.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 C.F.R. 71.6(a)(13)]

103. Permit Renewal. To renew this permit, the Permittee shall submit to the Department²⁹ an application under 18 AAC 50.326 no sooner than **July 22, 2023** and no later than **July 22, 2024**. The renewal application shall be complete before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the stationary source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 C.F.R. 71.7(b) and 71.5(a)(1)(iii).

[18 AAC 50.040(j)(3), 50.326(c) & (j)(2)]
[40 C.F.R. 71.5(a)(1)(iii) & 71.7(b) & (c)(1)(ii)]

²⁸ As defined in 40 C.F.R. 71.2, CAA Section 502(b)(10) changes are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

²⁹ Submit permit applications to the Department's Anchorage office. The current address is: Air Permit Intake Clerk, ADEC, 555 Cordova Street, Anchorage, AK 99501.

Section 10. General Compliance Requirements

104. Compliance with permit terms and conditions is considered to be compliance with those requirements that are

104.1. included and specifically identified in the permit; or

104.2. determined in writing in the permit to be inapplicable.

[18 AAC 50.326(j)(3) & 50.345(a) & (b)]

105. The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14.120(c), 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for

105.1. an enforcement action;

105.2. permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or

105.3. denial of an operating permit renewal application.

[18 AAC 50.040(j), 326(j) & 50.345(a) & (c)]

106. For applicable requirements with which the stationary source is in compliance, the Permittee will continue to comply with such requirements.

[18 AAC 50.040(j) & 326(j)]

[40 C.F.R. 71.6(c)(3) & 71.5(c)(8)(iii)(A)]

107. For applicable requirements that will become effective during the permit term, the Permittee shall meet such requirements on a timely basis.

[18 AAC 50.040(j) & 50.326(j)]

[40 C.F.R. 71.6(c)(3) & 71.5(c)(8)(iii)(B)]

108. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.326(j)(3) & 50.345(a) & (d)]

109. The Permittee shall allow the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator to

109.1. enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;

109.2. have access to and copy any records required by the permit;

109.3. inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and

109.4. sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.326(j)(3) & 50.345(a) & (h)]

Section 11. Permit As Shield from Inapplicable Requirements

In accordance with AS 46.14.290, and based on information supplied in the permit application, this section of the permit contains the requirements determined by the Department not to be applicable to the stationary source.

110. Nothing in this permit shall alter or affect the following:

- 110.1. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section; or
- 110.2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance.

[18 AAC 50.326(j)]
[40 C.F.R. 71.6(f)(3)(i) & (ii)]

111. Table H identifies the emissions units that are not subject to the specified requirements at the time of permit issuance. If any of the requirements listed in Table H becomes applicable during the permit term, the Permittee shall comply with such requirements on a timely basis including, but not limited to, providing appropriate notification to EPA, obtaining a construction permit and/or an operating permit revision.

[18 AAC 50.326(j)]
[40 C.F.R. 71.6(f)(1)(ii)]

Table D - Permit Shields Granted

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
1, 2, & 33 (gas-fired turbines)	40 C.F.R. 60 Subpart KKKK §60.4325	EU IDs 1, 2, & 33 cannot burn both natural gas and distillate oil (or some other combination of fuels).
1, 2, & 32(gas-fired turbines) and 33 (dual fuel-fired turbines)	40 C.F.R. 60 Subpart GG	Per 40 C.F.R. 60.4305(b), stationary combustion turbines regulated under 40 C.F.R. 60 Subpart KKKK are exempt from the requirements of Subpart GG.
	40 C.F.R. 60 Subpart KKKK §§60.4335, 60.4355	EU IDs 1, 2, 32, & 33 do not use water or steam injection.
	40 C.F.R. 60 Subpart KKKK §§60.4340(b), 60.4345, 60.4350, 60.4405, 60.4410	Permittee does not elect to use CEMS or continuous parameter monitoring to monitor compliance.
	40 C.F.R. 60 Subpart KKKK §60.4390	EU IDs 1, 2, 32, & 33 are not emergency combustion turbines or a research and development turbine.
	40 C.F.R. 63 Subpart YYYY	The stationary source is not a major source of hazardous air pollutants.
68, 116 (RICE units)	40 C.F.R. 60 Subpart IIII	Engines are not firewater pumps and were manufactured before April 2, 2006.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	40 C.F.R. 63 Subpart ZZZZ §§63.6600, 63.6601, 63.6602, 63.6610, 63.6611	Stationary source is not a major source of hazardous air pollutants. Emissions units are not 4SLB engines.
	40 C.F.R. 63 Subpart ZZZZ §§63.6612, 63.6615, 63.6620, 63.6625, 63.6630, 63.6635, 63.6640	Engine is not accessible by Federal Aid Highway System and is not subject to a numerical emission standard or operating limitation.
9 – 13, 23, 24, 69 – 71, 94, 95, 98 – 101, 106 – 112, 114, 115 (Diesel-fired boilers and heaters)	40 C.F.R. 63 Subpart DDDDD	The stationary source is not a major source of hazardous air pollutants.
9 – 13, 23, 24, 98 – 101 (diesel-fired rig heaters and boilers)	40 C.F.R. 63 Subpart JJJJJ	These emissions units are “temporary boilers” as defined in 40 C.F.R. 63.11237. “Temporary boilers” are exempt from this rule per 40 C.F.R. 63.11195(h).
69 – 71, 107 – 110, 114, 115 (diesel-fired boilers)	40 C.F.R. 63 Subpart JJJJJ	Per 40 C.F.R. 63.11237, emission units are not subject to the requirements of 40 C.F.R. 63 Subpart JJJJJ because units do not heat water to recover thermal energy in the form of steam and/or hot water.
106, 111, & 112 (fuel gas- and propane-fired boilers)	40 C.F.R. 63 Subpart JJJJJ	Per 40 C.F.R. 63.11195(e), emissions units are not subject to the requirements of 40 C.F.R. 63 Subpart JJJJJ because units are gas-fired boilers as defined in the subpart.
96 (incinerator)	40 C.F.R. 60 Subparts AAAA and BBBB	The incineration unit is not capable of burning 35 tons of waste per day per 40 C.F.R. 60.1010(b) and 60.1550(a)(1).
	40 C.F.R. 60 Subpart CCCC	The incineration unit did not commence construction after June 4, 2010 and did not commence reconstruction or modification after August 7, 2013.
	40 C.F.R. 60 Subpart EEEE	The unit is excluded from the subpart as a commercial and industrial solid waste incineration (CISWI) unit under Subpart DDDD of this part and is required to meet the emission limitations established in the subpart, per 40 C.F.R. 60.2887(d).
	40 C.F.R. 60 Subpart FFFF	The unit is regulated under Subpart DDDD of this part or Federal Plan Subpart III of Part 62 and is required to meet the emission limitations in those subparts, per 40 C.F.R. 60.2993(d).
	18 AAC 50.050(b)	The limits of the standard do not apply to incinerators with a rated capacity less than 1,000 lb/hr. EU

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
		ID 96 has a rated capacity of 300 lb/hr.
14 – 20, 74, 75, 78, 97, 102– 105, 117, 124, 125 (nonroad engines, NREs)	18 AAC 50.055	Nonroad engines are not subject to the state emission standards because they do not meet the definition of “fuel-burning equipment” or “industrial process” in 18 AAC 0.990.
Stationary Source-Wide	40 C.F.R. 60 Subpart Cd, D, Da, Db, K, Ka, Kb, L, P, Q, R, DD, AAA, LLL, DDDD, and JJJJ	No affected emissions units within stationary source. Boilers are not subject to D, Da, or Db because all are smaller than 100 MMBtu/hr. Storage tanks are exempted from K and Ka because all tanks are less than 40,000 gallons. Storage tanks are exempted from Subpart Kb because petroleum storage is prior to custody transfer, and none of the other liquids have a high enough maximum true vapor pressure.
Stationary Source-Wide	40 C.F.R. 61 Subpart J	Stationary source does not contain any equipment in benzene service (>10% by weight).
Stationary Source-Wide	40 C.F.R. 61 Subpart V	No equipment at the stationary source contains or contacts fluid that is at least 10% benzene or vinyl chloride.
Stationary Source-Wide	40 C.F.R. 63 Subpart HH	Per 40 C.F.R. 63.760(d), the facility is not subject to the requirements of 40 C.F.R. 63, Subpart HH because the source is an area source of hazardous air pollutants and does not include a triethylene glycol dehydration unit. [40 C.F.R. 63.760(b)(2) and (d)]

Section 12. Visible Emissions Forms

VISIBLE EMISSIONS OBSERVATION FORM

This form is designed to be used in conjunction with EPA Method 9, “Visual Determination of the Opacity of Emissions from Stationary Sources.” Temporal changes in emission color, plume water droplet content, background color, sky conditions, observer position, etc. should be noted in the comments section adjacent to each minute of readings. Any information not dealt with elsewhere on the form should be noted under Additional Information. Following are brief descriptions of the type of information that needs to be entered on the form. For a more detailed discussion of each part of the form, refer to “Instructions for Use of Visible Emission Observation Form” (a copy is available in <https://www3.epa.gov/ttnemc01/methods/webinar8.pdf>).

- Source Name: full company name, parent company or division or subsidiary information, if necessary.
- Address: street (not mailing or home office) address of facility where visible emissions observation is being made.
- Phone (Key Contact): number for appropriate contact.
- Stationary Source ID Number: number from NEDS, agency file, etc.
- Process Equipment, Operating Mode: brief description of process equipment (include type of facility) and operating rate, % capacity, and/or mode (e.g. charging, tapping, shutdown).
- Control Equipment, Operating Mode: specify type of control device(s) and % utilization, control efficiency.
- Describe Emission Point: for identification purposes, stack or emission point appearance, location, and geometry; and whether emissions are confined (have a specifically designed outlet) or unconfined (fugitive).
- Height Above Ground Level: stack or emission point height relative to ground level; can use engineering drawings, Abney level, or clinometer.
- Height Relative to Observer: indicate height of emission point relative to the observation point.
- Distance from Observer: distance to emission point; can use rangefinder or map.
- Direction from Observer: direction plume is traveling from observer.
- Describe Emissions and Color: include physical characteristics, plume behavior (e.g., looping, lacy, condensing, fumigating, secondary particle formation, distance plume visible, etc.), and color of emissions (gray, brown, white, red, black, etc.). Note color changes in comments section.
- Visible Water Vapor Present?: check “yes” if visible water vapor is present.
- If Present, note in the Comments column whether the Plume is “attached” if water droplet plume forms prior to exiting stack, and “detached” if water droplet plume forms after exiting stack.
- Point in Plume at Which Opacity was Determined: describe physical location in plume where readings were made (e.g., 1 ft above stack exit or 10 ft. after dissipation of water plume).
- Describe Plume Background: object plume is read against, include texture and atmospheric conditions (e.g., hazy).
- Background Color: sky blue, gray-white, new leaf green, etc.
- Sky Conditions: indicate color of clouds and cloud cover by percentage or by description (clear, scattered, broken, overcast).
- Wind Speed: record wind speed; can use Beaufort wind scale or hand-held anemometer to estimate.
- Wind Direction From: direction from which wind is blowing; can use compass to estimate to eight points.
- Ambient Temperature: in degrees Fahrenheit or Celsius.
- Wet Bulb Temperature: can be measured using a sling psychrometer
- RH Percent: relative humidity measured using a sling psychrometer; use local US Weather Bureau measurements only if nearby.
- Source Layout Sketch: include wind direction, sun position, associated stacks, roads, and other landmarks to fully identify location of emission point and observer position.
- Draw North Arrow: to determine, point line of sight in direction of emission point, place compass beside circle, and draw in arrow parallel to compass needle.
- Sun’s Location: point line of sight in direction of emission point, move pen upright along sun location line, mark location of sun when pen’s shadow crosses the observer’s position.
- Observation Date: date observations conducted.
- Start Time, End Time: beginning and end times of observation period (e.g., 1635 or 4:35 p.m.).
- Data Set: percent opacity to nearest 5%; enter from left to right starting in left column. Use a second (third, etc.) form, if readings continue beyond 30 minutes. Use dash (-) for readings not made; explain in adjacent comments section.
- Comments: note changing observation conditions, plume characteristics, and/or reasons for missed readings.
- Range of Opacity: note highest and lowest opacity number.
- Observer’s Name: print in full.
- Observer’s Signature, Date: sign and date after performing VE observation.
- Observer’s Affiliation: observer’s employer.
- Certifying Organization, Certified By, Date: name of “smoke school,” certifying observer, and date of most recent certification.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION AIR PERMITS PROGRAM - VISIBLE EMISSIONS OBSERVATION FORM									
Page No.									
Stationary Source Name		Type of Emission Unit		Observation Date		Start Time		End Time	
Emission Unit Location				Sec Min	0	15	30	45	Comments
City	State	Zip		1					
Phone # (Key Contact)		Stationary Source ID Number		2					
Process Equipment		Operating Mode		3					
Control Equipment		Operating Mode		4					
Describe Emission Point/Location				5					
Height above ground level	Height relative to observer	Clinometer Reading		6					
Distance From Observer		Direction From Observer		7					
Start		End		8					
Describe Emissions & Color				9					
Start				10					
End				11					
Visible Water Vapor Present? If yes, determine approximate distance from the stack exit to where the plume was read				12					
No	Yes			13					
Point in Plume at Which Opacity Was Determined				14					
Describe Plume Background				15					
Background Color				16					
Start				17					
End				18					
Sky Conditions:				19					
Start				20					
End				21					
Wind Speed				22					
Wind Direction From				23					
Start				24					
End				25					
Ambient Temperature				26					
Wet Bulb Temp				27					
RH percent				28					
SOURCE LAYOUT SKETCH: 1 Stack or Point Being Read 2 Wind Direction From				29					
3 Observer Location 4 Sun Location 5 North Arrow 6 Other Stacks				30					
				31					
				32					
				33					
				34					
				35					
				36					
				37					
				38					
				39					
				40					
Additional Information:				41					
Range of Opacity:				Minimum		Maximum			
I have received a copy of these opacity observations				Print Observer's Name					
Print Name:				Observer's Signature					
Signature:				Date					
Title				Observer's Affiliation:					
Date				Certifying Organization:					
				Certified By:					
				Date					
Data Reduction:									
Duration of Observation Period (minutes):				Duration Required by Permit (minutes):					
Number of Observations:				Highest Six - Minute Average Opacity (%):					
Number of Observations exceeding 20%:				Highest 18-Consecutive - Minute Average Opacity (%)(engines and turbines only)					
In compliance with six-minute opacity limit? (Yes or No)									
Average Opacity Summary:									
Set Number	Time			Opacity					
	Start	End		Sum	Average				

Section 13. Notification Form³⁰

Nikaichuq Development

AQ0923TVP02

Stationary Source Name

Air Quality Permit Number.

Eni US Operating Co. Inc.

Company Name

When did you discover the Excess Emissions/Permit Deviation?

Date: ____ / ____ / ____

Time: ____ : / ____

When did the event/deviation occur?

Begin: Date: ____ / ____ / ____

Time: ____ : ____ (please use 24-hr clock.)

End: Date: ____ / ____ / ____

Time: ____ : ____ (please use 24-hr clock)

What was the duration of the event/deviation? ____ : ____ (hrs:min) or ____ days
(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

Reason for Notification: (please check only 1 box and go to the corresponding section)

- ☐ Excess Emissions – Complete Section 1 and Certify
- ☐ Deviation from Permit Condition – Complete Section 2 and Certify
- ☐ Deviations from COBC, CO, or Settlement Agreement – Complete Section 2 and Certify

Section 1. Excess Emissions

(a) **Was the exceedance** ☐ Intermittent or ☐ Continuous

(b) **Cause of Event** (Check one that applies):

- ☐ Start Up/Shut Down ☐ Natural Cause (weather/earthquake/flood)
- ☐ Control Equipment Failure ☐ Schedule Maintenance/Equipment Adjustment
- ☐ Bad Fuel/Coal/Gas ☐ Upset Condition ☐ Other _____

(c) **Description**

Describe briefly, what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

³⁰ Revised as of September 27, 2010.

(d) **Emissions Units Involved:**

Identify the emissions unit involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

EU ID	EU Name	Permit Condition Exceeded/Limit/Potential Exceedance

(e) **Type of Incident** (please check only one):

- ☐ Opacity _____ % ☐ Venting _____ gas/scf ☐ Control Equipment Down
☐ Fugitive Emissions ☐ Emission Limit Exceeded ☐ Recordkeeping Failure
☐ Marine Vessel Opacity ☐ Flaring ☐ Other _____

(f) **Unavoidable Emissions:**

Do you intend to assert that these excess emissions were unavoidable? ☐ Yes ☐ No

Do you intend to assert the affirmative defense of 18 AAC 50.235? ☐ Yes ☐ No

Certify Report (go to end of form)

Section 2. Permit Deviations

(a) **Permit Deviation Type** (check only one box corresponding with the section in the permit):

☐ Emissions Unit-Specific	☐ Generally Applicable Requirements
☐ Failure to Monitor/Report	☐ Reporting/Monitoring for Diesel Engines
☐ General Source Test/Monitoring Requirements	☐ Insignificant Emissions Unit
☐ Recordkeeping/Reporting/Compliance Certification	☐ Stationary Source Wide
☐ Standard Conditions Not Included in the Permit	

☐ Other Section: _____ (Title of section and section number of your permit).

(b) **Emissions Units (EU) Involved:**

Identify the emissions units involved in the event, using the same identification number and name as in the permit. List the corresponding permit conditions and the deviation.

EU ID	EU Name	Permit Condition/ Potential Deviation

(c) **Description of Potential Deviation:**

Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) **Corrective Actions:**

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: _____ Title: _____ Date: _____

Signature: _____ Phone Number: _____

NOTE: *This document must be certified in accordance with 18 AAC 50.345(j)*

To submit this report:

1. Department's Air Online Services using the Permittee Portal option:

<http://dec.alaska.gov/applications/air/airtoolsweb>

Or

2. Fax to: 907-451-2187

Or

3. Email to: DEC.AQ.Airreports@alaska.gov

Or

4. Mail ADEC
to: Air Permits Program
 610 University Avenue
 Fairbanks, AK 99709-3643

Or

5. Phone Notifications: 907-451-5173

Phone notifications require a written follow-up report.

If submitted online, report must be submitted by an authorized E-Signer for the stationary source.

[18 AAC 50.346(b)(3)]

Section 14. Emission Inventory Form

A detailed instruction on completing and submitting the emission inventory form is available on the Department's Air Online Services (AOS) system at <http://dec.alaska.gov/Applications/Air/airtoolsweb/PointSourceEmissionInventory> by selecting the "Emission Inventory Instructions" button. This form can also be completed online in the Department's AOS system at <http://dec.alaska.gov/applications/air/airtoolsweb> and selecting the Permittee Portal option.

ADEC Reporting Form Emission Inventory Reporting State of Alaska Department of Environmental Conservation Division of Air Quality		Emission Inventory Year- [] Check one: Annual ☐ Triennial ☐	
Mandatory information is highlighted in bright yellow. Make additional copies as needed.			
Stationary Source Detail			
Inventory Start Date			
Inventory End Date			
ADEC ID or Permit Number			
EPA ID			
Census Area/Community			
Facility Name			
Facility Physical Location	Address		
	City, State, Zip Code		
	Latitude	Longitude	
	Legal Description:		
Owner Name			
Owner Address			
Owner contact number			
Mailing Contact Information	Address		
	City, State, Zip Code		
Line of Business (NAICS)			
Facility Status			

Emissions unit Data			
Specifications			
ID	Design Capacity		
Description			
Emissions unit Status			
Manufacturer	Manufactured Year		
Model Number	Serial Number		
Regulations			
Regulation/Description			
Control Equipment (List All if applicable)			
ID			
System Description			
Equipment Type(s)			
Manufacturer			
Model			
Control Efficiency (%):			
Capture Efficiency (%)			
Pollutants Controlled	Reduction Efficiency (%)		
	Reduction Efficiency (%)		
Processes			
Process			
SCC Code			
Material Processed			
Period Start			
Period End			
Throughput (units):			
Summer %			
Fall %			
Winter %			
Spring %			
Operational Schedule			
Days/Week			
Hours/Day			
Weeks/Year			
Hours/Year			
Fuel Characteristics			
Heat Content	Elem. Sulfur Content (%)	H2S Sulfur Content	Ash Content (if applicable)
Heating			
Heat Input	Heat Output	Heat Values Convention	

Emission Operating Type					
Pollutant	Emission Factor (EF)	EF Numerator	EF Denominator	Emission Calculation Method	Tons
Carbon Monoxide (CO)					
Nitrogen Oxides (NO _x)					
PM ₁₀ Primary (PM ₁₀ -PRI)					
PM _{2.5} Filterable (PM ₂₅ -FIL) ³¹					
PM Condensable (PM-CON) ³²					
Sulfur Dioxide (SO ₂)					
NH ₃ (Ammonia)					
Lead and lead compounds					
Volatile Organic Compounds (VOC)					
Emissions' Release Point					
Release Point ID					
Apportion%					
Process Secondary Process (if applicable)					
SCC Code (ex. 20100201)					
Material Processed					
Period Start					
Period End					
Throughput (units):					
Summer %					
Fall %					
Winter %					
Spring %					
Operational Schedule					
Days/Week					
Hours/Day					
Weeks/Year					
Hours/Year					
Fuel Characteristics					
Heat Content	Elem. Sulfur Content	H2S Sulfur Content		Ash Content (if applicable)	
Heating					
Heat Input	Heat Output			Heat Values Convention	

³¹ Report PM-2.5 filterable and PM condensable portions of the PM-2.5 Primary emissions, as applicable, in accordance with Federal Regulation 40 C.F.R. 51.15(a)(1)(vi). Refer to EPA's May 2017 "Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations" (see Section 4.2.1) for guidance on the reporting of PM-2.5 filterable and condensable emissions.

³² Please note on the inventory form if there is no available emission factor that can be used for an applicable condensable PM. For example, EPA AP-42 Table 3.3-1 does not contain a condensable PM emission factor for diesel engines smaller than 600 Hp.

Emissions Operating Type:					
Pollutant	Emission Factor (EF)	EF Numerator	EF Denominator	Emission Calculation Method	Tons
Carbon Monoxide (CO)					
Nitrogen Oxides (NO _x)					
PM ₁₀ Primary (PM ₁₀ -PRI)					
PM _{2.5} Primary (PM ₂₅ -PRI)					
Sulfur Dioxide (SO ₂)					
Lead and Lead Compounds					
NH ₃ (Ammonia)					
Volatile Organic Compounds (VOC)					
Emissions' Release Point					
Release Point ID					
Apportion%					

Stack Detail (Release Point)	
> Specifications	
ID	
Type	
Description	
Stack Status	
> Stack Parameters	
Stack Height (ft)	
Stack Diameter (ft)	
Exit Gas Temp (F)	
Exit Gas Velocity (fps)	
Exit Gas Flow Rate (acfm)	
> Geographic Coordinate	
Latitude	
Longitude	
Datum	
Accuracy (meters)	
Base Elevation (meters)	

Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Printed Name: _____ Title _____ Date _____

Signature: _____ Phone number _____

NOTE: *This document containing the complete emissions inventory report for the stationary source must be certified in accordance with 18 AAC 50.345(j). Read and sign the certification in the bottom of the form above. (See Condition 91.)*

Submit this report as follows:

1. Direct data entry for emission inventory can be done through the Department's Air Online Services (AOS) System at <http://dec.alaska.gov/Applications/Air/airtoolsweb/> and clicking the Permittee Portal link. A myAlaska account is needed to gain access and a profile needs to be set up in Permittee Portal;

OR

2. E-mail to: DEC.AQ.airreports@alaska.gov;

OR

3. Mail to: ADEC, Air Permits Program
ATTN: Emissions Inventory
555 Cordova Street
Anchorage, AK 99501;

OR

4. Fax this form to: 907-269-7508

If submitted online, the complete report must be submitted by an authorized E-Signer for the stationary source according to Condition 91.1.

[18 AAC 50.346(b)(9)]

Section 15. EEMSP Summary Report

FIGURE 1--SUMMARY REPORT--GASEOUS AND OPACITY EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE

[Note: This form is referenced in 40 C.F.R. 60.7, Subpart A-General Provisions]

Pollutant (Circle One): SO₂ NO_x TRS H₂S CO Opacity

Reporting period dates: From _____ to _____

Company: _____

Emission Limitation: _____

Address: _____

Monitor Manufacturer: _____

Model No.: _____

Date of Latest CMS Certification or Audit: _____

Process Unit(s) Description: _____

Total source operating time in reporting period ¹: _____

Emission Data Summary ¹	CMS Performance Summary ¹
1. Duration of excess emissions in reporting period due to: a. Startup/shutdown b. Control equipment problems c. Process problems d. Other known causes e. Unknown causes 2. Total duration of excess emissions 3. Total duration of excess emissions x (100) / [Total source operating time] % ²	1. CMS downtime in reporting period due to: a. Monitor equipment malfunctions b. Non-Monitor equipment malfunctions c. Quality assurance calibration d. Other known causes e. Unknown causes 2. Total CMS Downtime 3. [Total CMS Downtime] x (100) / [Total source operating time] % ²

¹ For opacity, record all times in minutes. For gases, record all times in hours.

² For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 C.F.R. 60.7(c) shall be submitted.

Note: On a separate page, describe any changes since last quarter in CMS, process or controls.

I certify that the information contained in this report is true, accurate, and complete.

Name: _____

Signature: _____ Date: _____

Title: _____

Section 16. Appendices

Appendix A: Emission Factors

Table E presents NO_x emission factors for the Solar Taurus Turbines, EU IDs 1, 2, 32 (when burning fuel gas), and 33. The EFs reflect the results of the source test eni conducted in March 2011.

Table E - Solar Taurus NO_x EFs (lb/min) at Selected Ambient Temperatures

Percent Load	NO _x EFs (lb/min) at Indicated Ambient Temperature				
	60°F	30°F	0°F	-20°F	-60°F
10	0.10	0.11	0.11	0.25	0.26
20	0.13	0.13	0.14	0.29	0.31
30	0.16	0.16	0.17	0.34	0.35
40	0.19	0.20	0.28	0.38	0.40
45-49 ^a	0.19	0.20	0.20	0.38	0.40
45-49 ^b	0.05	0.05	0.06	0.16	0.51
50	0.05	0.05	0.06	0.16	0.51
60	0.05	0.06	0.06	0.18	0.56
70	0.06	0.06	0.07	0.20	0.62
80	0.06	0.07	0.07	0.43	0.66
90	0.07	0.07	0.08	0.43	0.72
100	0.07	0.08	0.09	0.25	0.78

Table Notes:

^a: Out of SoLoNO_x

^b: In SoLoNO_x

Table F presents CO emission factors for the Solar Taurus Turbines (EU IDs 1, 2, 32, and 33) at various ambient temperatures.

Table F - Solar Taurus CO EFs (lb/min) at Selected Ambient Temperatures

Percent Load	CO EFs (lb/min) at Indicated Ambient Temperature				
	60°F	30°F	0°F	-20°F	-60°F
10	11.25	11.52	11.87	12.03	12.67
20	12.50	12.70	12.70	12.70	12.70
30	12.70	12.70	12.70	12.70	12.70
40	12.70	12.70	12.70	12.70	17.03
45-49 ^a	12.70	12.70	12.70	12.70	17.03
45-49 ^b	0.06	0.01	0.01	0.01	0.46
50	0.06	0.01	0.01	0.01	0.46
60	0.05	0.01	0.01	0.01	0.43
70	0.06	0.01	0.01	0.01	0.47
80	0.06	0.01	0.01	0.01	0.51
90	0.07	0.01	0.01	0.01	0.54
100	0.07	0.08	0.09	0.36	0.60

Table Notes:

^a: Out of SoLoNO_x

^b: In SoLoNO_x

In order of hierarchy, Department-approved emission factors are as follows. Emission factors:

- (a) determined from performance tests
- (b) provided by the equipment manufacturer
- (c) listed in Table G; or
- (d) derived from emission factors listed in Table G and operation characteristics.

Table G - Average Emission Factors of Stationary Combustion Emissions Units

Emissions unit	NO _x	CO	Units of EF	Reference for Emission Factors
1, 2, and 33	5.1	5.2	lb/hr	Vendor data
32 (burning fuel gas)	5.1	5.2	lb/hr	Vendor data
32 (burning ULSD)	31.5	10	lb/hr	Vendor data (from AQ0923MSS08)
3	49.59	6.46	lb/hr	Vendor data
4	0.068	0.31	lb/MMBtu	AP-42, Table 13.5-1
47	6.71	0.88	g/bHp-hr	Vendor data
49	42.46	3.92	lb/hr	Vendor data
50	2.5	1.10	g/bHp-hr	Vendor data
64	3.45	0.54	g/bHp-hr	Vendor data
68 and 116	3.0	2.60	g/bHp-hr	AP-42, Table 3.3-1
96	3	10	lb/ton	AP-42, Table 2.1-12
	0.45	1.5	lb/hr	From rating & AP-42, Table 2.1-12
9-13, 23-24, 69-71, 98-101, 107-110, 114, and 115	20	5	lb/1,000 gal	AP-42, Table 1.3-1, 3
106	100	84	lb/MMscf	AP-42, Table 1.4-2
94, 95, 111, and 112	13	7.5	lb/1,000 gal	AP-42, Table 1.5-1
	0.1436	0.0829	lb/MMBtu	AP-42, Table 1.5-1 and fuel properties
93	20.6	2.0	lb/hr	Vendor data

Table Notes

For EU IDs 1, 2, 32, and 33, emission factors in Table E and Table F supersede emission factors in Table G for fuel gas.

Appendix B: Public Access Control Plan

Public Access Control Plan

ENI US Operating Co. Inc.

November 26, 2012

Purpose

This Public Access Control Plan for the Nikaichuq Project is designed to protect the general public from health and safety hazards that could occur as a result of heavy industrial work during well drilling, work-over activities, and crude oil production at Nikaichuq. ENI US Operating Co. Inc. (ENI) has established these reasonable restrictions on general public access to ensure adequate protection of public health and welfare.

ENI is committed to fully and adequately protecting the health and safety of its work force by remaining within the standards for air exposure of the Occupational Safety and Health Administration (OSHA) and, where the general public has access, the National and Alaska Ambient Air Quality Standards (AAQS). The primary purpose of this plan is to delineate the area to be protected and controlled for occupational health and safety from the area that is subject to unrestricted, general public access where the AAQS are applicable. By limiting access to Nikaichuq Project Facilities to ENI authorized personnel, ENI will reduce the chance that a member of the general public will be injured or otherwise impacted by ENI operations.

This plan ensures that reasonable measures are in place to accomplish reasonable restrictions on public access.

General Information

ENI is planning to construct an oil production facility and conduct production well drilling and development from a 600 foot by 600 gravel pad constructed on Oliktok Point (see Figure 1). ENI is also planning to construct a gravel Island approximately 3.5 miles north of the Oliktok Point Processing Facility to drill and install wells. The island will be approximately 630 feet wide and 830 feet long. Additionally during the construction phase of the Nikaichuq Project, Nikaichuq Project personnel will be housed in the Oliktok Construction Camp (OCC). As the Nikaichuq Project moves from the construction phase into the operational phase, personnel responsible for the operation of the Nikaichuq project will be housed in the Nikaichuq Operations Camp (NOC). At this point, ENI will no longer house Nikaichuq personnel at the OCC and will not be responsible for public access control. However, the camp may remain and be used by other companies.

ENI will restrict access to the Oliktok production facility, the off-shore gravel island and the personnel housing camps to ENI authorized personnel for health and safety and property control reasons. As a result, the ambient air boundary is marked by the edge of the gravel production and personnel camp pads and the off-shore gravel island with signs and reflective boundary markers that will delineate the controlled area. This is consistent with other ambient air boundary selections that have been made for similar facilities and circumstances on the North Slope. To accommodate the required safety zone for the processing facility safety flare, a

gravel triangle will be constructed on the south side of the pad that will extend some portions of the on-shore gravel pad up to 170 feet to the south.

Drilling, crude oil production and three-phase fluid processing will be conducted on the on-shore gravel pad. Drilling and crude oil production will occur on the off-shore gravel island. Three phase fluid that is produced from the off-shore gravel island will be shipped via pipeline to the Oliktok Point Processing Facility. Once development drilling and construction is completed on the off-shore gravel island, the island will be unoccupied with the exception of occasional maintenance activities. Operations on the off-shore gravel island will be monitored and controlled from the Oliktok Point Processing Facility. Remote monitoring systems will be installed on the off-shore gravel island to detect the presence of unauthorized personnel on the off-shore gravel island. Public access will be restricted at the edge of the gravel pad at the Oliktok Point Processing Facility, the NOC, and the off-shore gravel island.

The ambient boundary for the Oliktok Point Processing Facility will be marked on the east side by the west edge of the Oliktok road that provides access to the Kuparuk Seawater Treatment Plant (KSTP). The edge of the processing facility gravel pad will mark the north, south, and west ambient boundaries. The south edge of the NOC is marked by the north edge of the DS3Q access road. The east, north, and west edges of the NOC are marked by the gravel pad edge of the NOC.

Ambient air quality receptors were modeled on the Oliktok and DS3Q access roads and on the processing facility, and the NOC pad boundaries. The modeled concentrations on the roads and the pad boundaries show ambient air concentrations below the AAQS. Ambient air quality receptors were also modeled on the toe of the off-shore gravel island facility and the modeled concentrations on the toe of off-shore gravel island were also below the AAQS.

ENI will also establish a second boundary to ensure public safety during flaring by keeping the public a safe distance from the flare at all times. The safe distance from the flare is a semi-circle with a 170 foot radius centered on the extreme southern edge of the pad extension that contains the flare.

The ambient boundary for the off-shore gravel island will be marked along the edge of the off-shore gravel island and the ocean. The top of the off-shore gravel island is approximately 18 feet above sea level.

Public Access Control Measures

The Oliktok Point Processing Facility is located on Oliktok Point, which is a peninsula that is surrounded on three sides by the Beaufort Sea and is located within the Kuparuk River Unit (KRU). The KRU is controlled and operated by Conoco-Philips Alaska Incorporated (CPAI). Access to the KRU is controlled by CPAI. The only access to the Oliktok Point Processing Facility is from the south via the Oliktok Rd. Personnel are not allowed to travel to Oliktok Point without first obtaining permission from CPAI.

Personnel traveling to the KSTP will travel on the Oliktok Rd. passing east of the Oliktok Point Processing Facility. Personnel traveling to the KSTP will not need to cross or access the Oliktok Point Processing Facility in order to access the KSTP. KSTP personnel will not be allowed to

enter the Oliktok Point Processing Facility without first obtaining permission from the operator of the Oliktok Point Processing Facility. As a practical matter, few people are likely to visit or traverse the area in which Nikaichuq development and crude oil production will be located. However, road access by personnel without permission from CPAI to be in the area is possible. As a result, several measures will be implemented to reasonably ensure that unauthorized personnel do not access the Oliktok Point Processing Facility. These measures include:

1. Signs;
2. Pad boundary markers;
3. Education and training; and
4. Pad surveillance and exclusion.

The above listed measures will also be used to ensure that unauthorized personnel do not access the NOC, and off-shore gravel island, although the probability of unauthorized access to the gravel island is even less likely than the Oliktok Processing Facility. Details about the public access control measures are presented below.

Signs

To notify unauthorized personnel that they may not access the Oliktok Point Processing Facility, the NOC, and the off-shore gravel island, signs will be posted at strategic locations, as follows:

- On the northeast, northwest, southeast, and southwest corners of the Oliktok Point Processing Facility
- At designated points of ingress and egress from the Oliktok Point Processing Facility, and the NOC; and
- At the top of the two access ramps to the off-shore gravel island.

The sign specifications are:

- Each sign will be 4 feet by 6 feet and will be supported by sawhorse or pallet post with sandbags.
- Each sign will be inspected regularly and will be repaired or replaced, as necessary.
- Each sign will be free of visible obstructions.
- Each sign will read:

ENI US Operating Co. Inc.
DANGER
UNAUTHORIZED PERSONNEL KEEP OUT
If access is requested,
Contact Eni Security

In addition to the warning signs, reflective, boundary markers will be placed in the following locations:

- Along the eastern production pad border between the Oliktok Rd. and the Oliktok Point Processing Facility;

- Along the northern edge of the Oliktok Point Processing Facility pad separating it from the adjacent KSTP pad; and
- Along the southern edge of the NOC pad edge and the DS 3Q access road.

Reflective boundary markers will be used. In order to distinguish the pad boundary markers from the reflective road edge markers that are used on the North Slope, the pad boundary markers will be spaced at approximately fifty percent of the spacing that is normally used for road edge markers on the North Slope.

Education and Training

To work in or access the KRU, all personnel must have completed or be escorted by someone with eight hours of North Slope safety training. One rule that is emphasized in the training for North Slope workers is to be present only in locations where they are authorized to be. North Slope workers that are present at sites where they are not authorized are subject to discipline up to and including termination of employment. Additionally, during their local orientation training ENI workers and ENI contractors that will be working at the Oliktok Point Processing Facility and the gravel island will be made aware of this Public Access Control plan and that if they notice unauthorized personnel at the Oliktok Point Processing Facility, the NOC or the gravel island that they should notify appropriate personnel that an unauthorized person or persons are in Oliktok Point Processing Facility, the NOC, or the gravel pad.

Pad Boundary Surveillance

Unless prohibited by adverse weather conditions or similar safety related circumstances, the Oliktok Point Processing Facility, and the NOC will be formally checked at least twice a day. During these checks of the pad boundary, the inspector will check the following items:

1. The presence or indications of the presence, of unauthorized personnel within the Oliktok Point Processing Facility boundary;
2. That the pad boundary warning signs are clear of obstructions such as snow and are still standing. If possible, the inspector will fix sign problems when they are discovered; and
3. That the reflective pad boundary markers that delineate the northern and eastern pad boundaries are in place and are intact. If possible, the inspector will fix problems with the reflective pad boundary markers when they are discovered.

In addition to the formal pad inspections, all ENI personnel and ENI contractors will be responsible for maintaining Oliktok Point Processing Facility, the NOC, and the gravel island boundary integrity. When ENI personnel or ENI contractors notice either unauthorized persons within the pad boundaries or conditions that compromise the integrity of the pad boundaries, they are required to either correct the situation or notify appropriate personnel that have the authority to remedy the situation.

The gravel island will follow the same procedures that will be used for the Oliktok Point Processing Facility when ENI personnel or ENI contractors are present on the gravel island for construction, drilling, or maintenance activities. When the gravel island is unoccupied, the pad boundary will be monitored remotely from the Oliktok Point Processing Facility. If unauthorized personnel are present on the island, when the island is unoccupied, the person would not be exposed to pollutants exceeding the AAQS because with exception of the emergency generator,

no emissions units will be operating on the island when ENI or ENI contractor personnel are not present on the island.

Pad Boundary Violations

In the event that an unauthorized person enters the Oliktok Point Processing Facility, the NOC, or the offshore gravel island, they will be notified by a representative of ENI that they are not allowed within the perimeter of the Nikaitsuq facility without prior approval and will be escorted off the pad by a representative of ENI. The incident will be recorded in the Unauthorized Visitors Logbook and will list the person's name (if the unauthorized visitor will provide his name), the mode of travel, and the date and time of the incident

Figure 1. Oliktok Point Processing Facility Ambient Air Boundary.

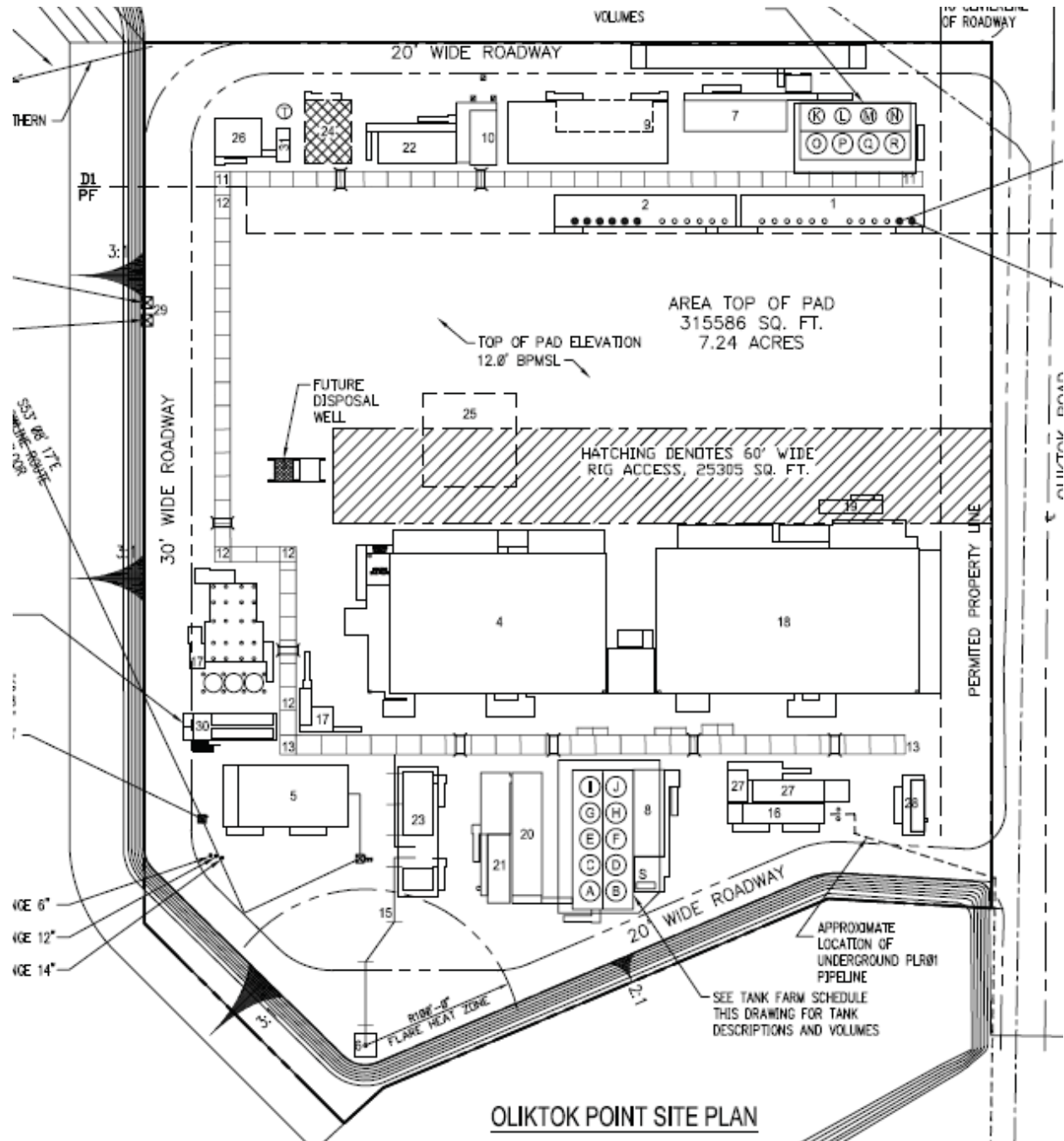
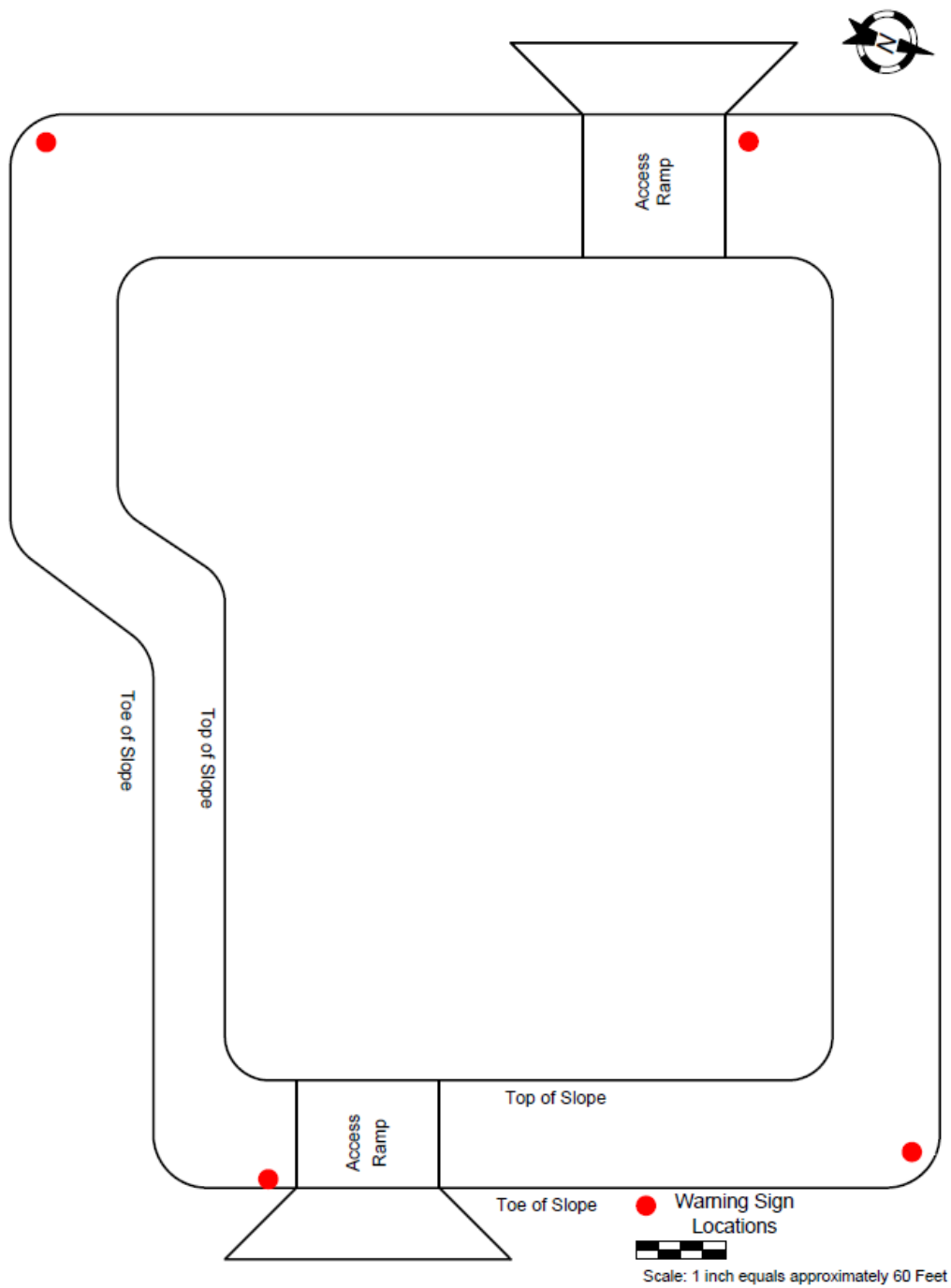


Figure 2. Off-Shore Oliktok Point Gravel Island



[illegible]

Appendix C: Eni Local Policy (November 6, 2009)

ENI LOCAL POLICY

Nikaitsuq Working Times and Hours Policy for Employees and Contractors

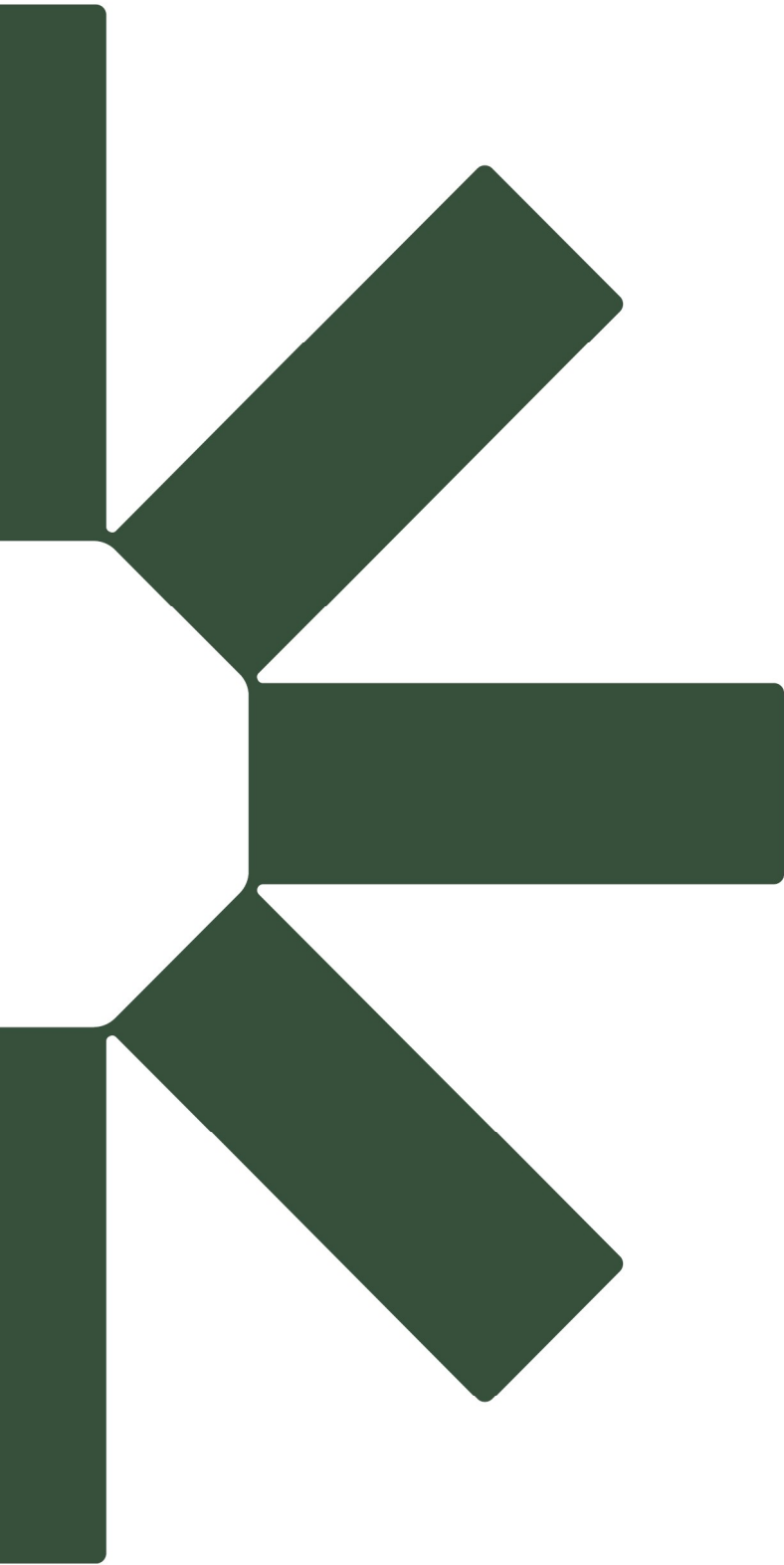
November 6, 2009

POLICY NAME: "ENI Working Times and Hours Policy"

POLICY STATEMENT: It is important that all employees and contractor employees know and understand the work schedule that is expected of them. This policy is written with the goal of making clear the days and hours that employees and contractor employees are expected to work at Nikaitsuq.

The work schedule at Nikaitsuq varies depending on the activity that an employee or a contractor is performing. Generally speaking, Nikaitsuq will operate around the clock. Nikaitsuq drilling and construction activities will also be conducted on a 24-hour basis. The normal shift at Nikaitsuq is 12 hours on and 12 hours off. When employees or contractor employees are not working they will reside at a camp provided by ENI Petroleum. Nikaitsuq camp facilities are for ENI Petroleum Employees and Contractor Employees on official business. No visitors that are not on official business may use Nikaitsuq camp facilities.

Camp facilities may either be local to Nikaitsuq or may be removed from the immediate vicinity of Nikaitsuq. Regardless as to the camp location, ENI employees or contractor employees can be required to work shifts in excess of 12 hours or be recalled to work during their off-shift time if emergencies or other special circumstances occur.



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