DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY CONTROL MINOR PERMIT

Permit No.: AQ0923MSS07 Date: **Preliminary: September 11, 2012**
Rescinds AQ0923MSS06 and AQ0923MSS08

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit AQ0923MSS06 to the Permittee listed below.

Permittee:	**Eni US Operating Co. Incorporated** 3800 Centerpoint Drive Anchorage, AK 99503 (907) 865-3300
Owner:	Same as Permittee
Operator:	Same as Permittee
Stationary Source:	Nikaitchuq Development
Location:	UTM Zone 6; Northing 6,035,548 m; Easting 1,656,839 m (NAD83)
Physical Address:	200 feet southeast of Kuparuk River Unit Seawater Treatment Plant
Permit Contact:	Jane Thomas; Phone (907) 685-1457; NikEnvCoord@enipetroleum.com; Carol Klein; Phone (907) 685-1457; NikEnvCoord@enipetroleum.com
Project	Revision of Emission Unit Inventory and Stack Characteristics

This project is classified under 18 AAC 50.508(6) to revise or rescind 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.

The Permittee may operate under this permit upon issuance.

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John F. Kuterbach
Manager, Air Permits Program

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Section 1. Emission Unit Inventory

1. 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

Station	ID	Emission Unit Description	Make / Model	Fuel	Rating / Size
On-Shore Production Pad (OPP)	1	Gas Turbine	Solar Taurus 70	Fuel Gas	7,520 kW
	2	Gas Turbine	Solar Taurus 70	Fuel Gas	7,520 kW
	33	Gas Turbine	Solar Taurus 70	Fuel Gas	7,520 kW
	32	Gas Turbine when burning fuel gas	Solar Taurus 70	Fuel Gas	7,520 kW
		Gas Turbine when burning ULSD	Solar Taurus 70	Diesel	7,520 kW
	3	Reciprocating MTU Generator	16V 4000 G83 D	Diesel	2,500 kW
	4A	Daily Purge & Pilot Operation	Process Safety Flares	Fuel Gas	0.36 mmscf/day
	4B	Low Pressure Emergency Operation			7 MMscf/day
	5	Off-Specification Crude Oil Tank #1	To Be Determined	N/A	750 Barrels each
	6	Off-Specification Crude Oil Tank #2			
	34	Off-Specification Crude Oil Tank #3			
	35	Off-Specification Crude Oil Tank #4			
	36	Off-Specification Crude Oil Tank #5			
	37	Off-Specification Crude Oil Tank #6			
	38	Off-Specification Crude Oil Tank #7			
	39	Off-Specification Crude Oil Tank #8			
	40	Off-Specification Crude Oil Tank #9			
	41	Off-Specification Crude Oil Tank #10			
	7	Diesel Storage Tank #1			
	42	Diesel Storage Tank #2			
	8	Methanol & Corrosion Inhibitor Tank 1			
	43	Methanol & Corrosion Inhibitor Tank 2			
	44	Antifoam, Scale Inhibitor Tank 1			
	45	Antifoam, Scale Inhibitor Tank 2			
	46	Antifoam, Scale Inhibitor Tank 3			
	69	Weil McLain Boiler #1	Weil McLain Boilers	Diesel	0.75 MMBtu/hr each
	70	Weil McLain Boiler #2			
	71	Weil McLain Boiler #3			
	106	Standby Boiler and Heater	To Be Determined	Fuel Gas	10.5 MMBtu/hr
	78	Construction Power Gen (NRE) #1	Caterpillar 3616C	Diesel	2,763 bhp each
Oliktok Construction Camp (OCC)	80	OCC Camp Generator #1	Caterpillar C-18	Diesel	769 bhp
	81	OCC Camp Generator #2	Caterpillar C-18	Diesel	769 bhp
	82	OCC Camp Generator #3	CAT 2456 DITA	Diesel	680bhp
	83	Building Heaters C-Wing	To Be Determined	Propane	1.6 MMBtu/hr
	84	Building Heaters D-Wing			1.6 MMBtu/hr
	85	Building Heaters E-Wing			1.6 MMBtu/hr
	86	Dining & Main Area Bldg Heaters			2.2 MMBtu/hr
	87	Water Plant Building Heaters			0.1 MMBtu/hr
	88	Gym Building Heaters			0.1 MMBtu/hr
	89	Drilling Camp Generators #1	Cummins QSX 15	Diesel	779 bhp each

	90	Drilling Camp Generators #2			
	91	Office Generators – Rec Engine #1	John Deere 6068T	Diesel	138 bhp each
	92	Office Generators – Rec Engine #1			
Nikaitchuq Operations Camp (NOC)	93	Reciprocating Engine – Generator	MTU 16V 4000	Diesel	1,115 kW
	94	NOC Boiler #1	Weil-McLain	Propane	3 MMBtu/hr each
	95	NOC Boiler #2			
	96	Multiple Chamber Incinerator	Pennram ESS C-300	Wastes	300 lb/hr
	97	Construction Power Generator (NRE)	CAT C-32	Diesel	1,381 bhp
	111	NOC Warm Storage Boiler #1	Weil-McLain 780	Propane	0.787 MMBtu/hr each
	112	NOC Warm Storage Boiler #2			
Off-Shore Production Pad	47	Emergency Generator – Rec Engine	MTU 16V400G83	Diesel	3,351 bhp
	48	Multiple Chamber Incinerator	Pennram ESS C	Wastes	300 lb/hr
	49	Standby Generator #1 – Recip. Eng	Caterpillar 3516C	Diesel	3,635 bhp
	50	Fire Water Pump Engine	John Deere 6068 E		183 bhp
	107	Drilling Support Boiler #1	Burnham V1110-WO	Diesel	2.43 MMBtu/hr each
	108	Drilling Support Boiler #2			
	109	G&I Boiler #1	Burnham FD-38	Diesel	1.73 MMBtu/hr each
	110	G&I Boiler #2			
	114	MI Tank Farm Boiler #1	To Be Determined	Diesel	*0.649 MMBtu/hr each*
	115	MI Tank Farm Boiler #1	To Be Determined	Diesel	
	116	WIF Cement Pump Engine #2 (NRE)	Detroit 8V-71N	Diesel	320 bhp
	64	WIF Cement Pump Engine (NRE)	J. Deere 6090HF485	Diesel	422 bhp
	68	WIF Cement Pump Engine #1 (NRE)	Detroit Dsl 8V-71N	Diesel	320 bhp
	51	Diesel Storage Tank #3	To Be Determined	N/A	750 Barrels each
	52	Diesel Storage Tank #4			
	53	Diesel Storage Tank #5			
	54	Crude Oil Process & Storage Tank #11			
	55	Crude Oil Process & Storage Tank #12			
	56	Crude Oil Process & Storage Tank #13			
	57	Crude Oil Process & Storage Tank #14			
	58	Crude Oil Process & Storage Tank #15			
	59	Crude Oil Process & Storage Tank #16			
	60	Crude Oil Process & Storage Tank #17			
	61	Crude Oil Process & Storage Tank #18			
	62	Crude Oil Process & Storage Tank #19			
	63	Crude Oil Process & Storage Tank #20			

Table Notes:

a. 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.

b. The Permittee shall not use EUs 5 and 6 for routine flow-through of sales-quality crude oil.

c. The process safety flare (EU 4B, emergency operation) is rated at 50 MMscf/day for high pressure operation

d. NRE means Nonroad Engine. All other EUs are stationary

e. N/A means Not Applicable or Not Available

2. The Permittee is authorized to operate two drilling rigs in accordance with the terms and conditions of this permit and the minor permit application.

2.1 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 5,330 bhp

Table 2: On-Shore Development Drilling Rig

EU ID	EU Description	Make / Model	Rating
9	Cleaver Brooks Rig Boiler #1	CB100-100	4.2 MMBtu/hr each
10	Cleaver Brooks Rig Boiler #2		
11	Tioga Rig Heaters #1	1DF-21B0	
12	Tioga Rig Heaters #2		
13	Tioga Rig Heaters #3	1DF-11C0	2.5 MMBtu/hr
14	Rig Engine #1 (NRE)	Caterpillar D399	1,125 bhp each
15	Rig Engine #2 (NRE)		
16	Rig Engine #3 (NRE)		
17	Rig Engine #4 (NRE)		
18	General Motors (NRE)	CAT D353	230 bhp
74	Cummins Reciprocating Engine #1 (NRE)	To be Determined	300 bhp each
75	Cummins Reciprocating Engine #2 (NRE)		

Table Notes:
All of the EUs listed in table are diesel-fired
NRE means Nonroad Engine

2.2 EUs 98 through 105 (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 15.1 MMBtu/hr and the cumulative engine rating shall not exceed 9,448 bhp.

Table 3: Offshore Development Drilling Rig Emission Units

EU ID	EU Description	Make / Model	Rating
98	Superior Boiler #1	To Be Determined	3.3 MMBtu/hr
99	Superior Boiler #2		
100	Dick's Rig Heater #1		3.5 MMBtu/hr
101	Dick's Rig Heater #2		5.0 MMBtu/hr
102	Reciprocating Engine #1 (NRE)	Caterpillar 3516	2,523 bhp
103	Reciprocating Engine #2 (NRE)		
104	Reciprocating Engine #3 (NRE)		
105	Reciprocating Engine #4 (NRE)	Caterpillar 3512	1,879 bhp

Table Notes:
All of the emission units are diesel-fired
NRE means Nonroad Engine

3. The Permittee is authorized to periodically, operate intermittent well servicing equipment listed in Table 4 in accordance with the terms and conditions of this permit[1]

3.1 EUs listed in Table 4 are collectively called "Workover Rig".

[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.

3.2 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, the cumulative engine rating of EUs in the Workover Rig shall not exceed 1,225 bhp, and the rating of portable flare shall not exceed 83 Mscf/hr.

Table 4: Partial List of Intermittent Well Servicing Equipment

EU ID	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
113	Portable Flare (2 MMscf/day, 30 MMscf/yr)		83 Mscf/hr

Table Notes:
All of the emission units are diesel-fired, except the portable flare.
NRE means Nonroad Engine

4. Label each EU listed in Table 1 with the EU ID within 30 days of installing the emission unit. Place the ID in a conspicuous location on or adjacent to the EU.

5. For each emission unit listed in Table 1, submit to the Department's Fairbanks Office the following information within 30 days of installing the EU:

5.1 actual installation date;

5.2 serial number, model number;

5.3 vendor specification sheet.

6. For EUs 1, 2, 32, and 33:

6.1 Submit to the Department's Fairbank Office the emission and fuel control settings (as provided by the vendor) within 30 days of installing each emission unit. If the Permittee makes changes to the emission and fuel control settings, the Permittee shall provide the revised settings and the reason for the revision in the operating report submitted under Condition 32 for that operating period.

6.2 Construct the stacks with:

a. sampling ports that comport with 40 CFR 60, Appendix A, Method 1, Section 2.1, and stack or duct *free of cyclonic flow* at the port location during the applicable test methods and procedures;

b. safe access to the sampling ports; and

c. utilities for emissions sampling and testing equipment.

7. For stationary diesel Internal Combustion Engines (EUs 3, 47, 49, 50, 68, 80, 81, 82, and 89 through 93), submit to the Department's Fairbanks Office the emission and fuel control settings (as provided by the vendor) within 30 days of installing the EU. Include for Department approval nitrogen oxides (NO_x) and carbon monoxide (CO) emission factors representing the maximum capacity of each EU to emit these pollutants in accordance with Conditions 13.1b and 14.1b. If the Permittee makes changes to the emission and fuel control settings, the Permittee shall provide the revised settings and the reason for the revision in the operating report submitted under Condition 32 for that operating period.

8. Prior to the start of production well drilling or 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

8.5 a statement as to whether the selected drilling rig complies with Condition 2.1a and Condition 2.2a.

Section 2. State Emission Standards

9. 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, 4A, 4B, 32, 33, 47, 49, 50, 69 through 71, 80 through 95, and 106 through 112, 114, and 115 listed in Table 1; EUs 9 through 13 listed in Table 2; EUs 98 through 101 listed in Table 3; and EUs 23, 24, and 113 listed in Table 4 to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

9.1 Record the date of initial start-up for the EUs listed below:

a. Diesel-fired EUs 3, 47, 49, 50, 80, 81, 82, 89 through 93 listed in Table 1, EUs 9 through 12 listed in Table 2; EUs 98 through 101 listed in Table 3; and EUs 23 and 24 listed in Table; and

b. Dual-fired turbine (EU 32) while burning diesel.

9.2 No later than 90 days of initial start-up of any EUs listed in Condition 9.1, verify initial VE compliance of the EU as follows:

a. Obtain a certified manufacturer's guarantee that the EUs will comply with Condition 9; or

b. Conduct a Method 9 VE source test on an EU no later than 90 days of initial operation of the EU.

9.3 For each stationary EU listed in Condition 9.2, attach a copy of the guarantee under Condition 9.2a or a copy of the surveillance records developed under Condition 9.2b, as applicable, to the operating report required under Condition 32 for the period covered by the report.

9.4 Conduct all VE source tests in a manner consistent with Condition 33.

10. Incinerator VE. The Permittee shall not cause or allow VE, excluding condensed water vapor, through the exhaust of EUs 48 and 96 listed in Table 1 to reduce visibility by more than 20 percent averaged over any six consecutive minutes.

10.1 Record the date of initial operation of the EUs 48 and 96.

10.2 No later than 90 days of start-up, verify initial compliance of EUs 48 and 96 as follows:

a. Obtain a certified manufacturer's guarantee that the EU will comply with Condition 10; or

b. Conduct a Method 9 VE source test on the EU within 90 days of initial operation of the EU.

10.3 For EUs 48 and 96, attach a copy of the guarantee under Condition 10.2a or a copy of the surveillance records developed under Condition 10.2b to the operating report required under Condition 32 for the period covered by the report.

10.4 Conduct all VE source tests in a manner consistent with Condition 33.

11. Industrial Process and Fuel-Burning Equipment Particulate Matter (PM). The Permittee shall not cause or allow PM emitted from stationary EUs 1, 2, 3, 4A, 4B, 32, 33, 47, 49, 50, 69 through 71, 80 through 95, 106 through 112, 114, and 115 listed in Table 1, EUs 9 through 13 listed in Table 2, EUs 98 through 101 listed in Table 3, and EUs 23, 24, and 113 listed in Table 4 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

11.1 The Permittee shall comply with Condition 11 by complying with Condition 9 and its sub-conditions.

12. Sulfur Compound Emissions. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from stationary EUs 1, 2, 3, 4A, 4B, 32, 33, 47, 49, 50, 69 through 71, 80 through 95, 106 through 112, 112, 114, and 115 listed in Table 1, EUs 9 through 13 listed in Table 2, EUs 98 through 101 listed in Table 3, and EUs 23, 24, and 113 listed in Table 4 to exceed 500 ppm averaged over three hours.

12.1 The Permittee shall comply with Condition 12 by complying with Condition 20.

Section 3. Requirements to Avoid PSD Classification

13. Carbon Monoxide (CO) Limits:

13.1 CO emissions from stationary EUs 1, 2, 3, 4A, 4B, 32, 33, 47, 48, 49, 50, 69, 70, 71, 80 through 96, and 106 through 112 listed in Table 1; EUs 9 through 13 listed in Table 2; EUs 98 through 101 listed in Table 3; and EUs 23, 24, and 113 listed in Table 4 shall not exceed 225 tons per 12-month rolling period[2]. Monitor and record 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,

(i) Capture the *60-second average load* in percent of full load and the *60-second average inlet air temperature* in degrees Fahrenheit (ºF) 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*. Data capture and recording may be electronic.

(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-2 of Appendix A. Consider all *60-second average loads* between 40 percent (inclusive) and 50 percent (exclusive), as 40 percent loads. Data rounding may be electronic.

(iii) Using the method described in Condition 13.1a(iv), determine the pounds (lb) of CO emitted during the 60-second period for the given *60-second average load* and *60-second average inlet air temperature*, as rounded under Condition 13.1a(ii). For each hour, sum the 60-second emissions to determine the hourly CO emissions in lb. Record the hourly CO emissions. Data selection and recording may be electronic.

(iv) When calculating the CO emissions under Condition 13.1a(iii), the Permittee must use either the pounds per minute (lb/min) CO emission values listed in 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 13.1a; is missing or suspect. Note which approach is used (if applicable) in the operating report submitted under Condition 32.

(A) If the *60-second average load* is unknown or suspect, use the largest lb/min CO emissions value in Table A-2 of Appendix A (or the substitute worst-case lb/min value) for the given inlet air temperature; or

[2] During the initial 12-months of operation, the Permittee shall treat the cumulative operation to date as a substitute for the 12-month rolling period.

(B) If the *60-second average inlet temperature* is unknown or suspect:

(1) use the largest lb/min CO emissions value in 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 under Condition 13.1a(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 or Department-approved substitute maximum lb/min value.

(v) By the end of each calendar month, calculate and record the *monthly CO emissions* (in lb) for the previous month for each EU by summing the CO emissions calculated in Condition 13.1a(iii) during the previous month. Calculation and recording may be electronic.

(vi) By the end of each calendar month, calculate and record the *cumulative monthly CO emissions* (in lb) for the previous month for CO Group A by summing all *monthly CO emissions* calculated in Condition 13.1a(v) for the previous calendar month. Calculation and recording may be electronic.

(vii) By the end of each calendar month, calculate and record the CO *Group A 12-month rolling CO emissions* in tons by summing the *cumulative monthly CO emissions* during the previous 12 months and dividing by 2,000 pounds per ton (lb/ton). Calculation and recording may be electronic.

b. Group B (Diesel Internal Combustion Engines - EUs 3, 47, 49, 50, 80, 81, 82, and 89 through 93). For Group B,

(i) Before initial start-up of each EU, install a dedicated engine hour meter.

(ii) Calculate and record the *monthly CO emissions* in pounds (lb) of each EU, using one of the following methods. The same method does not need to be used for all EUs. Identify the method selected for each EU in the operating report submitted under Condition 32.

(A) Full Load Assumption Method

(1) For each calendar month, monitor and record the *total monthly hours of operation* of the EU.

(2) By the end of each month, calculate the *monthly CO emissions* (in lb) for the previous month by multiplying the *total monthly hours of operation* of each EU by a Department approved emission factor[3] in pounds of CO per hour (lb/hr). If the *total monthly hours of operatio*n is unknown or suspect, use the total hours for that month.

(B) Hourly Load Tracking Method

(1) Install a dedicated electrical load meter on each EU.

(2) Monitor the *average electrical power* produced in kilowatts (kW) for each hour of operation of each EU. Record the number of hours each unit operated at that level, along with the *average electrical power*. The hours may be rounded up to the nearest whole integer and recorded in sequential ranges of produced power. Data capture and recording may be electronic.

(3) By the end of each calendar month, determine the *monthly CO emissions* in pounds (lb) for each EU for the previous month by summing the CO emissions associated with each recorded level of power production. Calculate the CO emissions associated with each level by multiplying the *average electrical power*, the hours operated at that level during the previous month, and Department approved CO emission factors in pounds per kilowatt-hr (lb/kWh).

(iii) By the end of each calendar month, calculate and record the *cumulative monthly CO emissions* (in lb) for CO Group B by summing the *monthly CO emissions* for all EUs 3, 47, 49, 50, 80, 81, 82, and 89 through 93 during the previous calendar month.

(iv) By the end of each calendar month, calculate and record the *Group B 12-month rolling CO emissions* (in tons) by summing the cumulative monthly CO emissions calculated in Condition 13.1b(iii) during the previous 12 months and dividing by 2,000 lb/ton.

c. Group C (Flares – EUs 4A, 4B, and 113). 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 emissions* (in lb) by multiplying standard *million cubic feet (MMscf) of flared gas* by 472 pounds per million standard cubic foot (lb/MMscf).

[3] 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.

(iii) By the end of each calendar month, calculate and record the *Group C 12-month rolling CO emissions (in tons)* by summing the cumulative monthly CO emissions during the previous 12 months and dividing by 2,000 lb/ton.

d. Group D (Heaters and Boilers - EUs 9 through 13, 23, 24, 69, 70, 71, 83 through 88, 94, 95, 98 through 101, and 106 through 112): For CO Group D,

(i) Determine and record the *monthly hours of operation* for each EU using one of the following two methods. The same method does not need to be used for all EUs. Identify the method selected for each EU in the operating report under Condition 32.

(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.

(ii) By the end of each calendar month, calculate, and record the *monthly CO emissions* (in lb) of each

(A) diesel-fired EU during the previous month by multiplying the EU's rating in million British Thermal Units per hour (MMBtu/hr) by 0.0417 lb/MMBtu and the *monthly hours of operation* determined under Condition 13.1d(i) for that month.

(B) propane-fired EU during the previous month by multiplying the EU's rating in MMBtu/hr by 0.0829 lb/MMBtu and the *monthly hours of operation* determined under Condition 13.1d(i) for that month.

(C) fuel-gas fired EU during the previous month by multiplying the EU's rating in MMBtu/hr by 0.0834 lb/MMBtu and the monthly hours of operation determined under Condition 13.1d(i) for that month.

(iii) By the end of each calendar month, calculate, and record the *cumulative monthly CO emissions* (in pounds) for CO Group D by summing the *monthly CO emissions* for EUs 9 through 13, 23, 24, 69, 70, 71, 83 through 88, 94, 95, 98 through 101, and 106 through 112 during the previous calendar month.

(iv) By the end of each calendar month, calculate, and record the *Group D 12-month rolling CO emissions* (in tons) by summing the *cumulative monthly CO emissions* calculated in Condition 13.1d(iii) during the previous 12-month and dividing the sum by 2,000 lb/ton.

e. Group E (Incinerators - EUs 48 and 96): For Group E,

(i) Determine and record the *monthly hours of operation* for each incinerator using one of the following two methods. The same method does not need to be used for both incinerators. Identify the method selected for each incinerator in the operating report under Condition 32.

(A) Daily Operation Method

(1) For each calendar day, monitor and record whether the incinerator 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.

(ii) By the end of each calendar month, calculate, and record the *monthly CO emissions* (in lb) of each incinerator by multiplying the *monthly hours of operation* of each incinerator determined in Condition 13.1e(i) by 1.5 lb/hr.

(iii) By the end of each calendar month, calculate, and record the *cumulative monthly CO emissions* (in pounds) for CO Group E by summing the *monthly CO emissions* for EUs 48 and 96 during the previous calendar month.

(iv) By the end of each calendar month, calculate, and record the *Group E 12-month rolling CO emissions* (in tons) by summing the *cumulative monthly CO emissions* calculated in Condition 13.1e(iii) during the previous 12-month and dividing the sum by 2,000 lb/ton.

f. Group F (EU 32 when firing ULSD):

(i) *By the end of* each calendar month, calculate, and record the *monthly CO emissions* (in lb) by multiplying the *monthly hours of operation* determined in Condition 23.1b by 10 *lb/hr*.

(ii) *By the end of* each calendar month, calcula*te, and record the cumulative monthly CO emissions* (in lb) for CO Group F by summing the *monthly CO emissions* for EU 32 when burning ULSD during the previous calendar month.

(iii) By the end of each calendar month, calculate, and record the *Group F 12-month rolling CO emissions* (in tons) by summing the *cumulative monthly CO emissions* calculated in Condition 13.1f(ii) during the previous 12-month and dividing the sum by 2,000 lb/ton.

g. By the end of each calendar month, calculate and record the *Total 12-Month Rolling CO Emissions* (in tons) by adding the respective *12-month rolling CO emissions for Groups A through F* together.

13.2 Report the *Total 12-Month Rolling CO Emissions* calculated under Condition 13.1f for each 12-month period covered by the operating report as described in

a. Condition 32 and

b. Condition 31, if the emissions exceed 225 tons.

13.3 In each operating report submitted under Condition 32, report

a. For each month of the reporting period:

(i) The range of inlet air temperatures recorded for each turbine (Emission Units 1, 2, 32 when burning fuel gas and when burning ULSD, and 33) during the month, and

(ii) Any periods where the monitoring equipment or electronic algorithm required under Condition 13.1, was malfunctioning or inoperable. Specify the malfunctioning or inoperable item with each period.

14. Nitrogen Oxides (NOx) Limits:

14.1 NO_x emissions from stationary EUs 1, 2, 3, 4A, 4B, 32, 33, 47, 48, 49, 50, 69 through 73, 80 through 96, and 106 through 112 listed in Table 1; EUs 9 through 13 listed in Table 2; EUs 98 through 101 listed in Table 3; and EUs 23, 24, and 113 listed in Table 4 shall not exceed 225 tons per 12-month rolling period[4]. Monitor and record as follows:

a. For Group A

[4] During the initial 12-months of operation, the Permittee shall treat the cumulative operation to date as a substitute for the 12-month rolling period.

(i) Using the method described in Condition 14.1a(ii), determine pounds of 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 13.1a(ii). For each hour, sum the 60-second emissions to determine hourly NO_x emissions (in pounds). Record the hourly NOx emissions. Data selection and recording may be electronic.

(ii) When calculating the NOx emissions under Condition 14.1a(i), the Permittee must use either the lb/min NOx values listed in Table A-1, or Department approved substitute lb/min values. Use one of the following approaches if a parameter measured under Condition 13.1a(i) is mission or suspect. Note which approach is used (if applicable) in the operating report submitted under Condition 32.

(A) If the *60-second average load* is unknown or suspect, use the largest lb/min NOx emissions in Table A-1 of Appendix A or the substitute worst-case lb/min value) for the given inlet air temperature.

(B) If the *60-second average inlet air temperature* is unknown or suspect:

(1) use the largest lb/min NO_x emissions in Table A-1 of Appendix A (or the worst-case lb/min value for the given load); or

(2) use the NWS temperature obtained under Condition 13.1a(iv)(B)(2) in lieu of the inlet air temperature when calculating the pounds of NO_x under Condition 14.1a(i).

(C) If the *60-second average load* and *the 60-second average inlet air temperature* are both unknown or suspect, use 0.78 lb/min (or the Department-approved substitute maximum lb/min value).

(iii) By the end of each calendar month, calculate, and record the *monthly NOx emissions* (in pounds) for each EU by summing the NO_x emissions calculated in Condition 14.1a(i) during the previous month. Calculation and recording may be electronic.

(iv) By the end of each calendar month, calculate, and record the *cumulative monthly NOx emission*s (in pounds) for NOx Group A by summing all monthly NOx emissions calculated in Condition 14.1a(iv) for the previous calendar month. Calculation and recording may be electronic.

(v) By the end of each calendar month, calculate and record the *Group A 12-month rolling NOx emissions* (in tons) by summing the cumulative monthly NOx emissions during the previous 12-months and dividing the sum by 2,000 lb/ton. Calculation and recording may be electronic.

b. For Group B

(i) Calculate and record the monthly NOx emissions (in pounds) of each EU using one of the following two methods. The same method does not need to be used for all EUs. Identify the method selected for each EU in the operating report submitted under Condition 32.

(A) Full Load Assumption Method:

(1) For each calendar month, monitor and record *the total monthly hours of operation* of each EU (if not previously monitored and recorded under Condition 13.1b(ii)(A)(1))

(2) By the end of each calendar month, calculate and record the *monthly NO_x emissions* (in pounds) for the previous month by multiplying the *total monthly hours of operation* of each unit, as recorded under Condition 13.1b(ii)(A)(1), by a Department-approved emission factor in units of NO_x per hour. If the *total monthly hours of operatio*n is unknown or suspect, use the total hours for that month.

(B) Hourly Tracking Method

(1) Comply with Condition 13.1b(ii)(B)(1).

(2) Comply with Condition 13.1b(ii)(B)(2).

(ii) By the end of each calendar month, determine the *monthly NOx emissions* (in pounds) for each EU for the previous month by summing the NOx emissions associated with each recorded level of power production. Calculate the NOx emissions associated with each level by multiplying the *average electrical power* (in kW), hours operated at that level during the previous month, and Department-approved NO_x emission factor in pounds per kilowatt-hour. By the end of each calendar month, calculate and record the *cumulative monthly NO_x emissions* (in pounds) for NO_x Group B by summing the *monthly NO_x emissions* for EUs 3, 47, 49, 50, 80, 81, and 82 through 93 during the previous calendar month.

(iii) By the end of each calendar month, calculate, and record the *NO_x Group B 12-month rolling NOx emissions* (in tons) by summing the *cumulative monthly NOx emissions* calculated in Condition 14.1b(ii) during the previous 12-months and dividing by 2,000 lb/ton.

c. For Group C,

(i) By the end of each calendar month, calculate and record the monthly NOx emissions (in pounds) by multiplying *MMscf of flared gas,* as recorded under Condition 13.1c(i) by 86.7 lb/MMscf.

(ii) By the end of each calendar month, calculate and record the Group C *12-month rolling NOx* emissions (in tons) by summing the cumulative monthly NO_x emissions during the previous 12 months and dividing the sum by 2,000 lb/ton.

d. For Group D,

(i) By the end of each calendar month, calculate and record the monthly NOx emissions (in lb) of each

(A) diesel-fired EU during the previous month by multiplying the EU's rating (in MMBtu/hr) by 0.1667 lb/MMBtu and the *monthly hours of operation* determined in Condition 13.1d(i).

(B) propane-fired EU during the previous month by multiplying the EU's rating (in MMBtu/hr) by 0.1436 lb/MMBtu and the *monthly hours of operation* determined in Condition 13.1d(i).

(C) fuel gas-fired EU during the previous month by multiplying the EU's rating in MMBtu/hr by 0.0980 lb/MMBtu and the *monthly hours of operation* determined in Condition 13.1d(i).

(ii) By the end of each calendar month, calculate and record the *cumulative monthly NOx emissions* (in pounds) for NO_x Group D by summing the *monthly NOx emissions* calculated in Condition 14.1**Error! Reference source not found.**(i) for EUs 9 through 13, 23, 24, 69, 70, 71, 83 through 88, 94, 95, 98 through 101, and 106 through 112 during the previous calendar month.

(iii) By the end of each calendar month, calculate and record the *Group D 12-month rolling NOx emissions* (in tons) by summing the *cumulative monthly NOx emissions* calculated in Condition 14.1(ii) during the previous 12 months and dividing the sum by 2,000 lb/ton.

e. For Group E

(i) By the end of each calendar month, calculate and record the monthly NOx emissions (in lb) of each incinerator by multiplying the *monthly hours of operation* determined in Condition 13.1e(i) by 0.45 lb/hr.

(ii) By the end of each calendar month, calculate and record the *cumulative monthly NOx emissions* (in pounds) for both incinerators (NO_x Group E) by summing the *monthly NOx emissions* calculated in Condition 14.1e(i) during the previous calendar month.

(iii) By the end of each calendar month, calculate and record the *Group E (incinerators) 12-month rolling NO_x emissions* (in tons) by summing the *cumulative monthly NO_x emissions* calculated in Condition 14.1e(ii) during the previous 12 months and dividing the sum by 2,000 lb/ton.

f. For Group F,

(i) By the end of each calendar month, calculate and record the monthly NOx emissions (in lb) by multiplying the *monthly hours of operation* determined in Condition 23.1b by 31.5 lb/hr.

(ii) By the end of each calendar month, calculate and record the *Group F 12-month rolling NO_x emissions* (in tons) by summing the *cumulative monthly NO_x emissions* calculated in Condition 14.1f(i) during the previous 12 months and dividing the sum by 2,000 lb/ton.

g. By the end of each calendar month, calculate and record the *Total 12-Month Rolling NOx Emissions* (in tons) by adding the respective *12-month rolling NOx emissions for NOx Groups A through F* together.

14.2 Report the *Total 12-Month Rolling NOx Emissions* calculated under Condition 14.1g for each 12-month period covered by the operating report as described in

a. Condition 32; and

b. Condition 31, if the *Total 12-month Rolling NOx Emissions* exceeds 225 tons.

14.3 In e*ach operating report submitted under* Condition 32, report

a. the *cumulative monthly NOx emissions* for NO_x Group A and Group F, as calculated in Condition 14.1a(iv), for each month of the reporting period;

b. the *Group A and Group F 12-month rolling NOx emissions*, as calculated in Condition 14.1a(v) and Condition 14.1f(ii); and

15. Verification of Turbine Emission Factors: Conduct a winter performance test on one of EUs 1, 2, or, 33, and 32 (when operating on fuel gas) to verify the CO and NOx emission factors in Table A-2 and Table A-1 of Appendix A. Use the performance test procedures described in Condition 33. Define winter as the period between December 1 and April 1.

15.1 Conduct the winter performance test within the first year of starting any of EU 1, 2, 32 (when burning fuel gas), or 33.

15.2 Except as noted in Condition 15.3, conduct the tests at the following turbine load[5] and inlet temperature conditions:

a. Inlet temperature greater than 0ºF and 80 percent to 90 percent load;

b. Inlet temperature greater than 0ºF and load less than 50 percent load;

c. Inlet temperature less than 0ºF and 80 percent to 90 percent load; and

d. Inlet temperature less than 0ºF and load less than 50 percent.

15.3 If the weather conditions do not allow for an inlet temperature of less than 0ºF, substitute the following for Conditions 15.2c and 15.2d: Inlet temperature greater than 0ºF, and 60 to 70% load.

[5] 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).

15.4 In the source test report submitted under Condition 33.4, compare the average CO emission factors in lb CO/min to the lb CO/min values listed Table A-2 and the average NOx emission factors in lb NO_x/min to the lb NO_x/min values listed in Table A-1, for each load and inlet temperature condition tested under Condition 15.2. Propose for Department approval under Condition 34, revised lb/min emission factors if source test results exceed the lb/min values listed in Table A-1 and Table A-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. Express all NOx concentrations as NO_2

c. 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 $SoLoNO_x$ mode.

d. Measure and report the heat content from a representative fuel sample

e. Note in the source test report whether the turbine was operating under the same emission and fuel control settings provided in Condition 6.1. If not, provide the emission and fuel control settings used during the performance tests

Section 4. Ambient Air Quality Protection Requirements

16. General Ambient Air Quality Provisions. Comply with the following provisions to protect the NO_2, SO_2, and PM-10 air quality standards:

16.1 **Air Quality Boundary**: Establish and maintain the ambient boundaries using the procedures described in Condition 17.

16.2 **Stack Configuration**:

a. For all stationary fuel EUs listed in Table 1, Table 2, Table 3, or Table 4 construct and 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, 50, 69-71, 83-88, 94, 95, 106-112, and 114-116.

(ii) Intermittent well service equipment rated at less than 400 bhp or 2.8 MMBtu/hr (as applicable) are exempt from Condition 16.2a.

b. Construct and 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

Emission Unit ID	Emission Unit Description	Minimum Release Height Above Ground (m)
1, 2, 32, and 33	Solar 70 Gas Turbines	28.0
3	MTU 16V 4000, 2,011 bhp Emergency Generator	7.0
47	2,709 bhp Diesel Standby Generator	8.2
9-12	Rig heaters, boilers, and Gen rated ≥ 4.2 MMBtu/hr	12.8
49	3,635 bhp Standby Generator #1	12.8
50	Firewater Pump, 183 bhp	6.4
14-17	Drilling Rig engines rated ≥ 400 hp	14.8
64	730 bhp Diesel Construction Camp Generator #1	11.3
68	1,100 bhp Diesel Grind & Inject Pump	11.7
79	Grind & Inject Power and Construction Power Engine	6.1
93	MTU 16V 4000 Generator	6.0
94 and 95	3 MMBtu/hr Propane-Fired NOC Boilers	7.7
98 and 99	3.3 MMBtu/hr Diesel Superior Boilers	11.6
100	Diesel-fired Dick's Rig Heater #1	12.6
101	Diesel-fired Dick's Rig Heater #2	12.1
102, 103, and 104	2,523 bhp Diesel-fired Caterpillar 3516 Engines	13.0
105	1,879 bhp Diesel-fired Caterpillar 3516 Engines	12.2
106	10.5 MMBtu/hr Fuel Gas Standby Heater	8.0
116	WIF Cement Pump Engine #2 (NRE); 320 bhp	6.4

Table Notes:
Stack heights determined in air quality modeling performed for this permit action.

c. Provide as-built drawings and/or photographs of each stack subject to Condition 16.2b in the first operating report submitted under Condition 32.

16.3 **On-Site Housing**: If providing on-site housing, follow the procedures described in Condition 18.

17. Public Access Control Plan[6]. Establish and maintain the ambient air boundaries as follows:

17.1 Comply with the provisions contained in the March 21, 2011 "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.

17.2 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).

18. 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:

18.1 a statement specifying that the worker housing area is for official business / worker use only; and

18.2 a statement specifying that the on-site workers are on 24-hour call.

19. Annual Average NO_2 and SO_2 Ambient Air Quality Protection: Protect the Annual Average NO_2 and SO_2 ambient air quality standards by:

19.1 Limiting the operation of EUs listed in Table 6 as follows:

[6] Public Access Control Plan as provided by Eni and presented in Appendix B. Eni revised the original plan.

a. Install 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. During the initial 12 month of operation, use the operation period to date as a substitute for the 12-month period.

d. Report the hours recorded under Condition 19.1b and 19.1c with the report required under

(i) Condition 32 for each month covered by the reporting period;

(ii) Condition 31 if the operation hours exceed the limits listed in Table 6.

Table 6: Annual Operating Limits of Emission Units

EU	Description of EU	Operating Limit
3	2,500 kW MTU 16V 4000 Diesel-fired Generator	2,000 hr/yr
14-17	1,125 bhp Diesel-fired Rig Engine #1 through #4, Caterpillar D399	6,570 hr/yr each
49	3,635 bhp Diesel-fired Drilling Camp Generator # 1	2,000 hr/yr
50	183 bhp Diesel-fired Fire Water Pump Engine	100 hr/yr
74	300 bhp Cummins Reciprocating Engine #1	8,760 hr/yr (combined)
75	300 bhp Cummins Reciprocating Engine #2	
78	2,763 bhp Diesel Construction Power Generators, CAT 3616C	1,500 hr/yr
93	1,115 kW Diesel-fired MTU 16V 4000 Generator	500 hr/yr
113	Portable Fuel Gas Flare rated at 83 Mscf/hr	30 MMscf/yr

19.2 Limiting 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 Conditions 19.2a in the report required under

(i) Condition 32 for each month of the reporting period; and

(ii) Condition 31 if the days exceed the limit specified in Condition 19.2.

20. Annual, 24-hr, and 3-hr Average SO_2 Ambient Air Quality Protection. Protect the Annual, 24-hr, and 3-hr Average SO_2 ambient air quality standards as follows:

20.1 For EUs 1, 2, 4, 32 (while burning natural gas), 33, and 106 burn only natural gas with hydrogen sulfide (H_2S) 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. Keep records of the monitoring conducted under Condition 20.1a, for five years. The records may be kept in electronic format.

c. Report the results of the monitoring conducted under Condition 20.1a, under

(i) Condition 32 for each month of the reporting period, as applicable; and

(ii) Condition 31 if H_2S content of the fuel gas exceeds 250 ppmv at any time.

20.2 For diesel burning EUs, burn only diesel fuel with sulfur content not exceeding 15 parts per million by weight (ppmw).

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 under

(i) Condition 32 the sulfur content of the diesel fuel burned in each of the EUs; and

(ii) Condition 31 if the sulfur content of the diesel fuel burned in any EU exceeds 15 ppmw.

20.3 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 under

(i) Condition 32 the sulfur content of the fuel burned in each of the EUs; and

(ii) Condition 31 if the sulfur content of the propane fuel burned in any EU exceeds 185 ppmw.

Section 5.Assessable Emissions and Estimates

21. Assessable Emissions

21.1 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 651 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.

22. Assessable Emission Estimates

22.1 Emission fees will be assessed as follows:

a. no later than March 31st 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 31st of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in Condition 21.1a.

Section 6. Limit to Avoid Source Testing for EU 32 When Operating on ULSD[7]

23. Operation Hours on ULSD: The Permittee shall operate EU 32 on ultra low sulfur diesel (ULSD) for no more than 600 hours per consecutive 12 months.

23.1 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.

c. By the end of each calendar month, add the previous months total operating hours for EU 32 when using ULSD to the previous 11 months total operating hours when EU 32 used ULSD. Include the totals in the Operating Report under Condition 32.

d. If the 12 month rolling total operating hours for EU 32 when operating on ULSD recorded in Condition 23c exceeds the limit in Condition 23, report as a permit deviation under Condition 31.

e. Include the records of the preceding consecutive 12 months totals recorded in Condition 23c in the Operating Report required under Condition 32.

[7] Carried over from Section 3 of Minor Permit AQ0923MSS08

Section 7. Requirements for Composition of Wastes Burned in Incinerators

24. Composition of Wastes Burned in Incinerators: Limit the amount of hospital wastes, medical wastes, and infectious wastes combusted in each incinerator, EUs 48 and 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:

24.1 Keep records on a calendar quarter basis of the weight of hospital waste, medical waste, infectious waste, and all other fuels and wastes combusted in each incinerator.

24.2 At the end each of month, calculate on a quarterly basis and record the percent by weight of hospital wastes, medical wastes, and infectious wastes in the total amount of material combusted in each incinerator.

24.3 Report in the operating report required by Condition 32, the percent of hospital wastes, medical wastes, and infectious wastes in the total wastes calculated in Condition 24.2 for each calendar quarter in the reporting period.

24.4 Report as a permit deviation in the Excess Emissions and Deviations Report required by Condition 31, if the percent of hospital wastes, medical wastes, and infectious wastes in the total wastes calculated in Condition 24.2 for each calendar quarter in the reporting period is not less than 10 percent.

Section 8. General Record Keeping, Reporting, and Compliance Requirements

25. Good Air Pollution Control Practice. The Permittee shall do the following for all EUs:

25.1 perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;

25.2 keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and

25.3 keep a copy of either the manufacturer's or the operator's maintenance procedures.

26. 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.

27. Monitoring, Record Keeping, and Reporting for Air Pollution Prohibited.

27.1 If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 31.

27.2 As soon as practicable after becoming aware of a complaint that is attributable to emissions from the facility, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 26.

27.3 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 facility have caused or are causing a violation of Condition 26; or

b. the Department notifies the Permittee that it has found a violation of Condition 26.

27.4 The Permittee shall keep records of the following:

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 26; and

d. any corrective actions taken or planned for complaints attributable to emissions from the facility.

27.5 With each operating report under Condition 32, the Permittee shall include a brief summary report which must include the following:

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.

27.6 The Permittee shall notify the Department of a complaint that is attributable to emissions from the facility within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.

28. 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.

28.1 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 09.25.510 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 28.1a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.

29. Submittals. Unless otherwise directed by the Department or this permit, the Permittee shall send an original and 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 28.

30. 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 that are required by the permit to be kept. The Department may require the Permittee to furnish copies of those records directly to the federal Administrator.

31. Excess Emissions and Permit Deviation Reports.

31.1 Except as provided in Condition 26, 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 Condition 31.1c(ii); and

(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 31.1c(i).

31.2 When reporting excess emissions or permit deviations the Permittee must report; using either the Department's on-line form, which can be found at http://www.dec.state.ak.us/air/ap/site.htm or https://myalaska.state.ak.us/deca/air/airtoolsweb/, or if the Permittee prefers, the form contained in Appendix D of this permit. The Permittee must provide all information called for by the form that is used.

31.3 If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.

32. Operating Reports During the life of this permit the Permittee shall submit to the Department an original and one copy of an operating report by August 1st for the period January 1st to June 30th of the current year and by February 1st for the period July 1st to December 31st of the previous year.

32.1 The operating report must include all information required to be in operating reports by other conditions of this permit. 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 Departmental submission requirements.

32.2 If excess emissions or permit deviations that occurred during the reporting period are not reported under Condition 32.1, either

a. The Permittee shall identify

(i) the date of the deviation;

(ii) the equipment involved;

(iii) the permit condition affected;

(iv) a description of the excess emissions or permit deviation; and

(v) any corrective action or preventive measures taken and the date of such actions, or

b. When excess emissions or permit deviations have already been reported under Condition 31 the Permittee shall cite the date or dates of those reports.

33. Verification (Source) Test Requirements: The Permittee shall conduct the verification (source) testing required or allowed by this permit as follows:

33.1 Use 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 alternative test procedures prior to the test date.

a. Nitrogen Oxides, NO_x, expresses as NO_2 (ppm and lb/hr): Reference Method 7E or Method 20.

b. Carbon Monoxide, CO (ppmv and lb/hr): Reference Method 10.

c. Oxygen, O_2 (percent): Reference Method 3 or 3A.

d. Stack Velocity and Volumetric Flow Rate: Reference Methods 1-4.

e. Visible Emissions: Reference Method 9.

33.2 Submit to the Department at least 30 days before the scheduled date of the tests, a complete plan for conducting the source tests. The Permittee need not submit this plan for a VE source test conducted under Condition 9.2b or Condition 10.2b.

33.3 Give the Department written notice of the test dates 10 days before each series.

33.4 Within 60 days after completion of the set of tests, submit the results, to the extent practical, in the format set out in *Source Test Report Outline* in Volume III, Section IV.3, of the State Air Quality Control Plan, adopted by reference in 18 AAC 50.030(8). Include all information required under Condition 15.4, if applicable.

34. Procedure for Revised Emission Factors: The Permittee must submit all requests for revised emission factors in writing, and will be considered as a permit modification under AS 46.14.285(a) (3).

34.1 The Department will treat all requests to *increase* emission factors as a permit amendment. If approved, the Department will issue a written amendment, but will not reopen the permit for public comment.

34.2 The Department will treat all requests to *decrease* emission factors as an application to revise or rescind the terms and conditions of a Title I permit under 18 AAC 50.508(6).

Section 9. Terms to Make Permit Enforceable

35. 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

35.1 an enforcement action; or

35.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280.

36. 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.

37. 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.

38. 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.

39. The permit does not convey any property rights of any sort, nor any exclusive privilege.

40. 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

40.1 enter upon the premises where an emission unit subject to the permit is located or where records required by the permit are kept;

40.2 have access to and copy any records required by the permit;

40.3 inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and

40.4 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 Kuukpik 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 to revise AQ0923MSS06
May 8, 2012	Eni submits application for AQ0923MSS08 requesting authorization to convert one of the turbines to dual fuel firing capability.

Appendix A: Emission Factors (EFs)[8]

Table A-1 and Table A-2 present 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 of 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	0.21	0.66
90	0.07	0.07	0.08	0.23	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 of 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	0.06	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

[8] The hierarchy of Department-approved emission factors (EFs) is as follows:
EFs determined from performance tests; provided by equipment manufacturer, listed in Table A-3, and determined from EF in Table A-3 and operation characteristics.

Table A-3: Average EFs of Stationary Combustion EUs

Emission Unit	NOx	CO	Units of EF	Reference for Emission Factors
1, 2,, and 33	8.42	5.2	lb/hr	Vendor (CAT) data
32 (burning fuel gas)	8.42	5.2	lb/hr	Vendor (CAT) data
32 (burning ULSD)	31.5	10	lb/hr	Vendor data (from AQ0923MSS08)
3	47.45	9.36	lb/hr	Vendor (CAT) data
4A, 4B, and 113	0.068	0.370	lb/MMBtu	AP-42, Table 13.5-1
4A, 4B, and 113	86.7	472	lb/MMscf	Assuming 1,275 Btu/scf
47	5.4	0.70	g/bhp-hr	Vendor data
49	5.9	0.55	g/bhp-hr	Vendor data
50	2.7	1.10	g/bhp-hr	Vendor data
68	3.0	2.60	g/bhp-hr	Vendor data
48 and 96	3	10	lb/ton	AP-42, Table 2.1-12
48 and 96	0.45	1.5	lb/hr	From rating & AP-42
9-13, 23-24, 69-71, 107-110	20	5	lb/1,000 gal	AP-42, Table 1.3-1, 3
	0.1667	0.0417	lb/MMBtu	Carried over from previous permits
82	7.43	0.73	lb/hr	Vendor Data
106	100	84	lb/MMscf	AP-42, Table 1.4-2
106	0.0980	0.0834	lb/MMBtu	Provided by Applicant
80 and 81	10.21 lb/hr	1.41 g/hphr		Vendor Data for 769 bhp
83-88, 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
89 and 90	10.32	2.518	lb/hr	Based on EFs for EU 80, 81
91 and 92	0.031	0.00668	lb/bhp-hr	AP-42, Table 3.3-1
93	19.8	3.6	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.
EFs for EUs 89 and 90 based on EFs for EUs 80 and 81.

Appendix B: Public Access Control Plan

Public Access Control Plan

ENI US Operating Co. Inc.
March 21, 2011

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 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 Nikaitchuq Project, Nikaitchuq Project personnel will be housed in the Oliktok Construction Camp (OCC). As the Nikaitchuq Project moves from the construction phase into the operational phase, personnel responsible for the operation of the Nikaitchuq project will be housed in the Nikaitchuq Operations Camp (NOC).

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 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 OCC, 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 west edge of the OCC is marked by the east edge of the Oliktok road. The east, north, and south edges of the OCC are marked by the gravel pad edge of the OCC. 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, OCC, 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 OCC, 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 OCC and 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, the OCC, 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;
- Along western OCC pad edge and the Oliktok Rd.; and
- Along the southern edge of the NOC pad edge and the DS 3Q access road.

Reflective boundary markers will 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 OCC, 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 OCC, 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, the OCC, 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 OCC, 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 OCC, 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 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

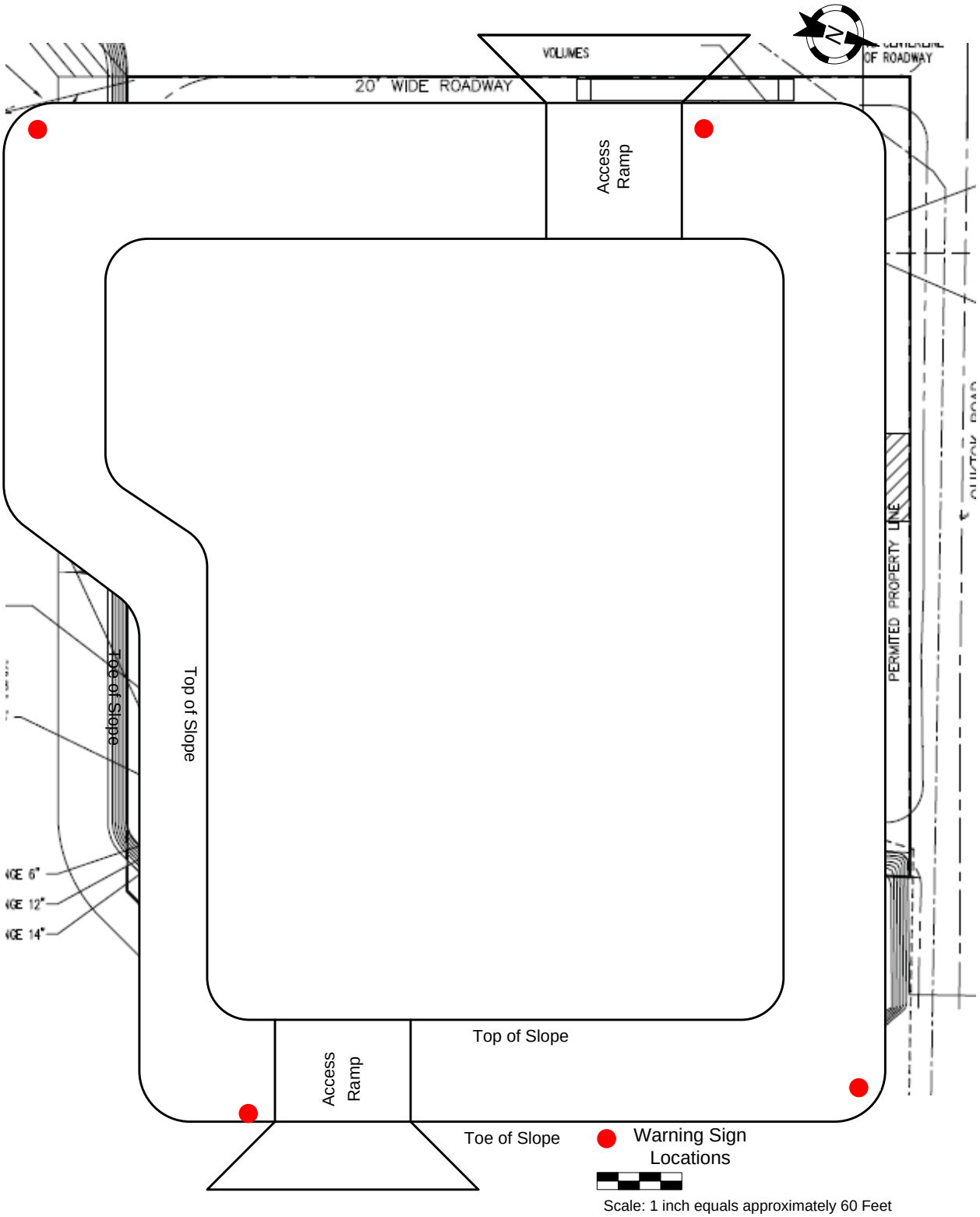


Figure 3. Nikaitchuq Operations Camp

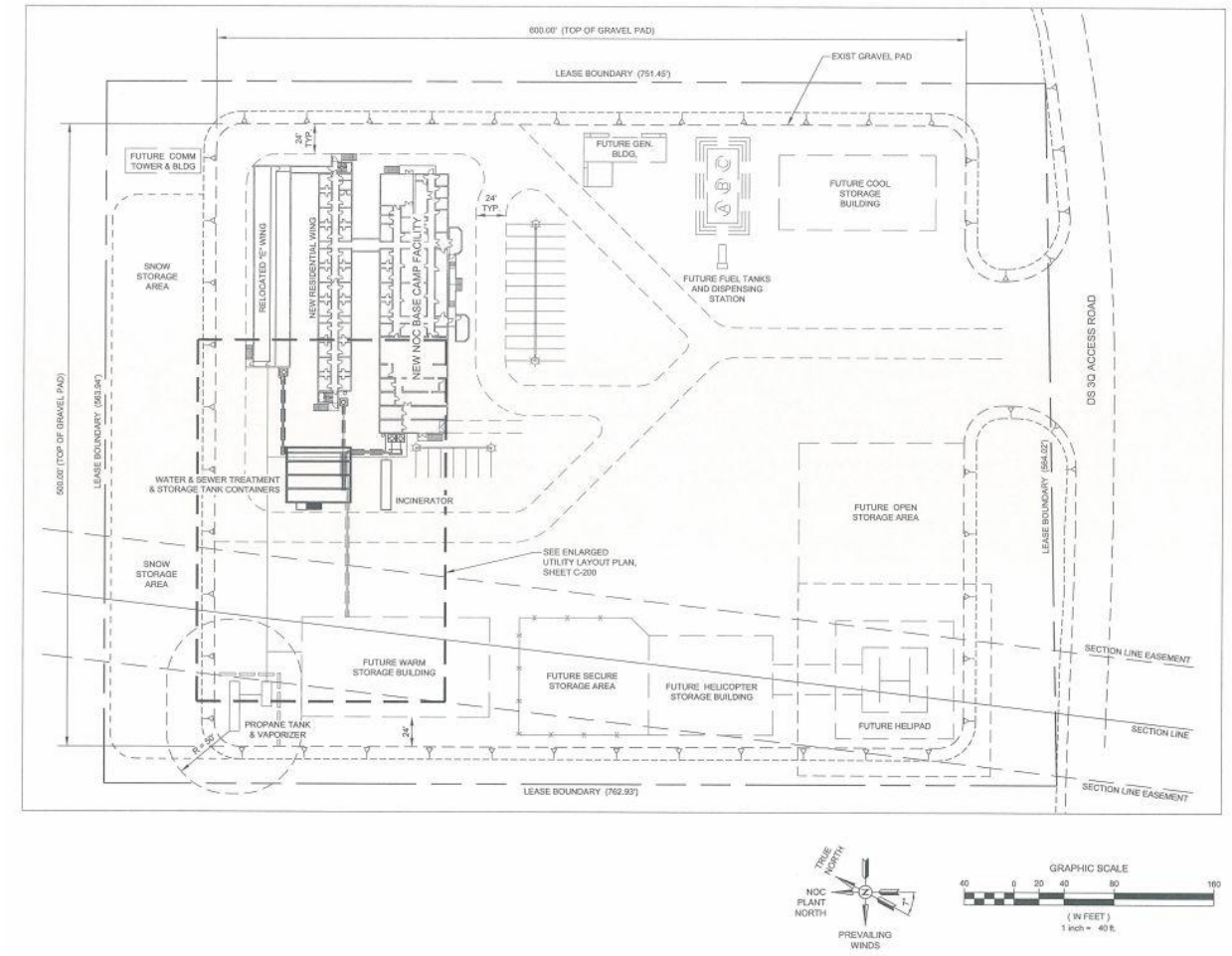
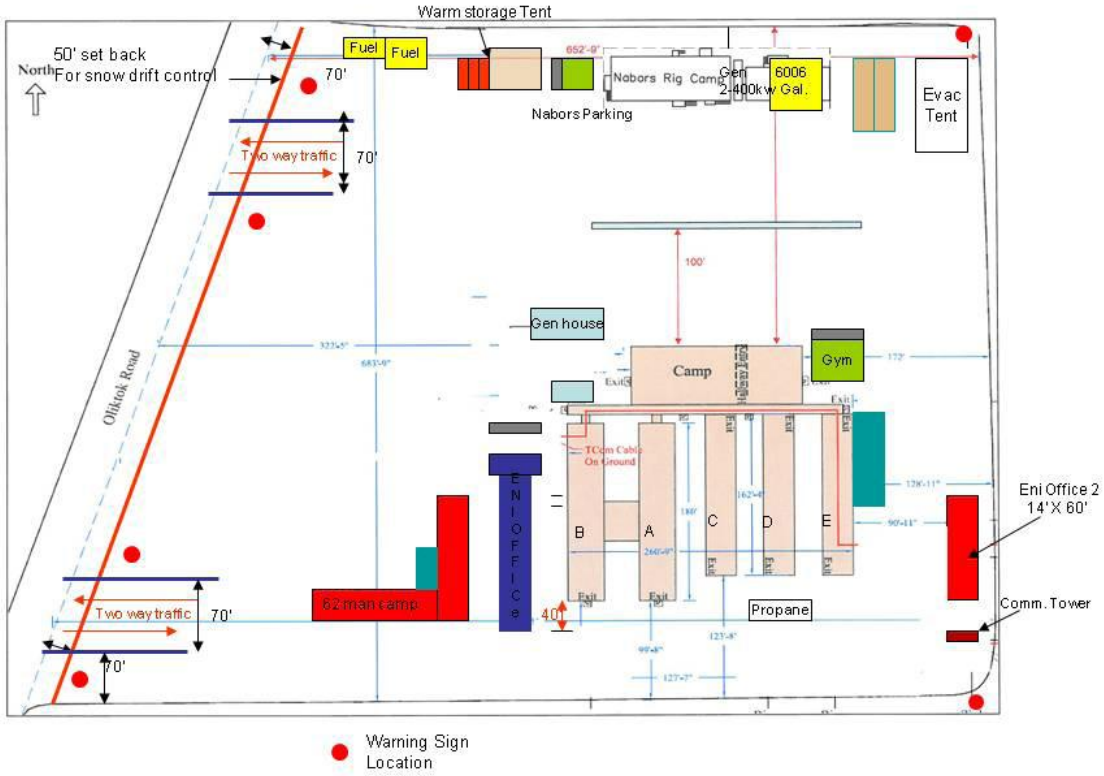


Figure 4. Oliktok Construction Camp Layout



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 may either 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.

Appendix D: ADEC Notification Form

Excess Emissions and Permit Deviation Reporting
State of Alaska Department of Environmental Conservation
Division of Air Quality

_____ _____
Stationary Source Name Air Quality Permit Number

_____
Company Name

When did you discover the Excess Emissions/Permit Deviation?
Date: / / Time: :
When did the event/deviation?
Begin: Date: / / Time: : (please use 24hr clock)
End: Date: / / Time: : (please use 24hr 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 Conditions - Complete Section 2 and Certify
☐ Deviation 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 ☐ Scheduled Maintenance/Equipment Adjustments
☐ 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) Emission 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.

Unit ID	Unit 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 ☐Record Keeping Failure
☐Marine Vessel Opacity ☐Failure to monitor/report ☐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 one only box, corresponding with the section in the permit)
☐Emission Unit Specific
☐General Source Test/Monitoring Requirements
☐Recordkeeping/Reporting/Compliance Certification
☐Standard Conditions Not Included in Permit
☐Generally Applicable Requirements
☐Reporting/Monitoring for Diesel Engines
☐Insignificant Emission Units
☐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 condition and the deviation.

Unit ID	Unit 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: airreports@dec.state.ak.us
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: *(web site is not yet available)*
if submitted online, report must be submitted by an authorized E-Signer for the Stationary Source.

Signature: Date