DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY CONTROL MINOR PERMIT

Minor Permit: AQ1201MSS04 **Preliminary Date – May 21, 2019**
Rescinds Permit No.: AQ1201MSS03 Revision 5

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit AQ1201MSS04 to the Permittee listed below.

Operator and Permittee:	ExxonMobil Alaska Production Inc. P.O. Box 196601 Anchorage, AK 99519
Owner:	ExxonMobil Alaska Production Inc.
Stationary Source:	Point Thomson Production Facility
Location:	Latitude: 70.172º North; Longitude: 146.256º West
Physical Address:	Point Thomson, North Slope, Alaska
Permit Contact:	Nikole Andres; Phone: (907) 564-3620 nikole.andres@esso.ca
Project:	Transition from Commissioning to Operations

The existing Point Thomson Production Facility project is classified under 18 AAC 50.502(c)(1) because potential oxides of nitrogen (NOx) and particulate matter emissions from the stationary source exceed the applicable thresholds under 18 AAC 50.502(c)(1). The existing project is also classified under 18 AAC 50.508(5) to establish owner requested limits (ORLs) to avoid a permit classification under AS 46.14.130, to avoid Prevention of Significant Deterioration (PSD) for NOx and minor permit applicability for sulfur dioxide (SO_2). AQ1201MSS04 is classified under 18 AAC 50.508(6) for revising an existing permit condition, and 18 AAC 50.508(5) for establishing an ORL to avoid a permit classification under AS 46.14.130, to avoid PSD for carbon monoxide (CO).

This permit satisfies the obligation of the Permittee to obtain a minor permit under 18 AAC 50. As required by AS 46.14.120(c) the Permittee shall comply with the terms and conditions of this permit.

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James R. Plosay, Manager
Air Permits Program

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Section 1 Emissions Unit Inventory

1. **Emissions Units (EU) Authorization.** The Permittee is authorized to install and operate the EUs listed in Table 1 and Table 2. The information in Table 1 and Table 2 is for identification purposes only, unless otherwise noted in the permit. The specific EU descriptions do not restrict the Permittee from replacing an EU identified in Table 1 and Table 2. 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 requirement.

Table 1: Production Emissions Units

ID	EU Name	Make / Model	Fuel Type	Max Capacity
96	Hot Oil Unit Heater	SuperTherm SPD-6	ULSD	8.0 MMBtu/hr
101	Fuel Gas Fired Turbine	Solar 70 Taurus	Fuel Gas	7,520 kW
102	Fuel Gas Fired Turbine		Fuel Gas	7,520 kW
103	Dual Fuel Fired Turbine	Solar 70 Taurus	Fuel Gas / ULSD	7,520 kW
104	Dual Fuel Fired Turbine			7,520 kW
107	Standby Camp Generator Engine No. 1	Caterpillar 3516	ULSD	2,695 hp
108	Standby Camp Generator Engine No. 2	Caterpillar 3516	ULSD	2,695 hp
109	Standby Camp Generator Engine No. 3	Caterpillar 3516	ULSD	2,695 hp
110	Fine Water Mist Pump Engine No. 1	Cummins QSX15	ULSD	610 hp
111	Fine Water Mist Pump Engine No. 2	Cummins QSX15	ULSD	610 hp
112	HP Flare	KMI 12-4-VS Tip	Gas	130 MMscf/yr
113	LP Flare	AZDAIR AZ-30 Tip	Gas	20 MMscf/yr
114	Airstrip Generator Engine	Caterpillar C15	ULSD	563 hp
115	ACRV Heater No. 1	Modine POR145	ULSD	0.175 MMBtu/hr
116	ACRV Heater No. 2	Modine POR145	ULSD	0.175 MMBtu/hr
130	Ground Heater	Thawzall TCH250	ULSD	0.28 MMBtu/hr
131	Portable Heater No. 1	TBD	ULSD	1.0 MMBtu/hr
132	Portable Heater No. 2	TBD	ULSD	1.0 MMBtu/hr
133	Portable Heater No. 3	TBD	ULSD	1.0 MMBtu/hr
134	Portable Heater No. 4	TBD	ULSD	1.0 MMBtu/hr
135	Portable Heater No. 7	TBD	ULSD	1.0 MMBtu/hr
136	Portable Heater No. 8	TBD	ULSD	1.0 MMBtu/hr
137	Portable Heater No. 8	TBD	ULSD	1.0 MMBtu/hr
138	Portable Heater No. 10	TBD	ULSD	1.0 MMBtu/hr
147	Used Oil-fired Heater	Reznor RA350	Used Oil/ULSD	0.5 MMBtu/hr
148	Production Support Engine	TBD	ULSD	400 hp
149	Refrigeration Unit (Reefer) Engine	Kubota V2203L	ULSD	24.8 hp
152	Deicer Heater	TBD	ULSD	1.9 MMBtu/hr
162	Portable Heater No. 11	TBD	ULSD	1.0 MMBtu/hr
163	Portable Heater No. 12	TBD	ULSD	1.0 MMBtu/hr
246	Waste Incinerator	Ketek CY100AD	Trash/ULSD	250 lb/hr

Table 2: Nonroad Engines (NRE): Production Emissions Units

ID	EU Name	Make / Model	Fuel Type	Max Capacity
117	Hot Oil Unit Engine	TBD	ULSD	375 hp
118	Air Compressor Generator Engine	TBD	ULSD	61 hp
119	Light Plant Generator Engine No. 1	TBD	ULSD	28 hp
120	Light Plant Generator Engine No. 2	TBD	ULSD	28 hp
121	Light Plant Generator Engine No. 3	TBD	ULSD	28 hp
122	Light Plant Generator Engine No. 4	TBD	ULSD	28 hp
123	Portable Moving Generator Engine No. 1	TBD	ULSD	32 hp
124	Portable Moving Generator Engine No. 2	TBD	ULSD	32 hp
125	Portable Moving Generator Engine No. 3	TBD	ULSD	32 hp
126	Freeze Protection Generator Engine No. 1	TBD	ULSD	99 hp
127	Freeze Protection Generator Engine No. 2	TBD	ULSD	99 hp
128	Freeze Protection Generator Engine No. 3	TBD	ULSD	99 hp
129	Ground Heater Engine	Kubota 482	ULSD	10.9 hp
139	Portable Heater Engine No. 1	TBD	ULSD	17 hp
140	Portable Heater Engine No. 2	TBD	ULSD	17 hp
141	Portable Heater Engine No. 3	TBD	ULSD	17 hp
142	Portable Heater Engine No. 4	TBD	ULSD	17 hp
143	Flameless Heater Engine No. 1	TBD	ULSD	17 hp
144	Flameless Heater Engine No. 2	TBD	ULSD	17 hp
145	Portable Heater Engine No. 7	TBD	ULSD	17 hp
146	Portable Heater Engine No. 8	TBD	ULSD	17 hp
150	Small Deicer Generator Engine	TBD	ULSD	10 hp
151	Deicer Generator Engine	TBD	ULSD	13 hp
153	SRT – Spill Response Air Compressor Engine	TBD	ULSD	61 hp
154	Triplex Pump Engine	Kubota V3800	ULSD	99 hp
155	Nitrogen Generator Engine No. 1	TBD	ULSD	800 hp
156	Nitrogen Generator Engine No. 2	TBD	ULSD	10 hp
157	Pump Engine	TBD	ULSD	175 hp
158	Portable Heater Engine No. 9	TBD	ULSD	17 hp
159	Portable Heater Engine No. 10	TBD	ULSD	17 hp
160	Portable Heater Engine No. 11	TBD	ULSD	17 hp
161	Portable Heater Engine No. 12	TBD	ULSD	17 hp
164	Foam Trailer Pump Engine	Kubota D1503	ULSD	25 hp
165	Foam Trailer Generator Engine	Kubota D902	ULSD	22 hp
166	ACS Engine No. 1	TBD	ULSD	54 hp
167	ACS Engine No. 2	TBD	ULSD	16 hp
168	Emergency Response Trailer Engine	TBD	ULSD	8 hp

Notes for Table 1 and Table 2

ULSD: Ultra Low Sulfur Diesel
TBD: To be Determined
hp: Horsepower
lb/hr: Pounds per hour
NRE: Nonroad Engine
kW: Kilowatts
MMBtu/hr: Million British thermal units per hour
MMscf/yr: Million standard cubic feet per year

Section 2 Fee Requirements

2. **Administration Fees.** The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-499.

Section 3 Ambient Air Quality Protection Requirements

3. To protect the annually averaged nitrogen dioxide (NO_2), 24-hour particulate matter with an aerodynamic diameter not exceeding a nominal 10 micrometers (PM-10), and annually averaged and 24-hour particulate matter with an aerodynamic diameter not exceeding a nominal 2.5 micrometers (PM-2.5) Alaska Ambient Air Quality Standards (AAAQS), the Permittee shall operate the stationary source as described below:

Public Access Control Plan for Ambient Protection

3.1 Comply with the provisions contained in the February 2013 Public Access Control Plan (as provided in Attachment 1), or a subsequent written version approved by the Department that only contains editorial revisions.

Stack Configuration for Ambient Protection

3.2 Construct and maintain vertical, uncapped exhaust stacks for all EUs listed in Table 1 except as noted below:

a. EUs 96, 107 through 111, 114 through 116, 130 through 138, 147 through 149, 152, 162, and 163 may have capped or horizontal releases; and

b. This condition does not preclude the use of flapper valve rain covers, or other similar designs, that do not hinder the vertical momentum of the exhaust plume.

Stack Heights for Ambient Protection

3.3 Construct and maintain exhaust stacks for the EUs listed in Table 3, with release points above the gravel pad surface that equal or exceed the height indicated in Table 3.

Table 3: Required Minimum Stack Heights

EU ID	Description of Equipment	Minimum Stack Height (m)
101 – 104	Solar 70 Taurus Turbines	27.4
107 - 109	Standby Camp Generator Engines Nos. 1 through 3	12.2
110 – 111	Fine Water Mist Pump Engines Nos. 1 and 2	16.6
112 – 113	High Pressure and Low Pressure Flares	35.6

Limits to Protect the Annual NO_2, PM-2.5; and 24-hour PM-10, PM-2.5 Standards

4. The Permittee shall not operate the following EUs as described below:

4.1 EUs 114 through 116 outside of the airstrip; and

4.2 EU 148 unless it meets the emissions standards for 40 C.F.R. 60 Subpart IIII for Tier 4i engines.

Monitor, record, and report as follows:

4.3 Record the location of EUs 114 through 116 if operated outside the airstrip.

4.4 Report in the operating report required by the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, for each month covered in the report, a statement that EUs 114 through 116 did not operate outside the airstrip.

4.5 Maintain engine certifications, performance test results, manufacturer data, or control device vendor data onsite that shows that EU 148 complies with the corresponding Tier level emission standards in Condition 4.2. Make the certifications, test results, or data available to Department personnel on request. The records may be kept in electronic format.

4.6 Report as excess emissions and permit deviation as described in the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, if Conditions 4.1 and 4.2 were not met.

Limits to Protect the Annual NO_2 and PM-2.5 Standards

5. The Permittee shall limit the combined hours of operation out of SoLoNOx mode[1] per 12 consecutive month period as follows:

5.1 EUs 101 through 104 to no more than 4,500 hours when firing fuel gas; and

5.2 EUs 103 and 104 to no more than 350 hours when firing ULSD.

Monitor, record, and report as follows:

5.3 Monitor and record, monthly, the number of hours

a. EUs 101 through 104 operated out of SoLoNOx mode when firing fuel gas; and

b. EUs 103 and 104 operated out of SoLoNOx mode when firing ULSD.

5.4 Calculate and record, monthly, the combined hours of operation out of SoLoNOx mode for the previous 12 consecutive month period for:

a. EUs 101 through 104 when firing fuel gas; and

b. EUs 103 and 104 when firing ULSD.

5.5 Report in the operating report required by the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, for each month covered in the report, the combined hours of operation for each 12 consecutive month period for:

a. EUs 101 through 104 out of SoLoNOx mode when firing fuel gas; and

b. EUs 103 and 104 out of SoLoNOx mode when firing ULSD.

5.6 Report as excess emissions and permit deviation as described in the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50,

[1] The turbines operate in SoLoNOx mode from 100- to 50-percent load, when firing fuel gas; and from 100- to 65-percent load, when firing ULSD. The SoLoNOx disable load is 45-percent for fuel gas and 60-percent for ULSD.

whenever the combined operating hours of EUs 101 through 104, out of SoLoNOx mode, exceed any of the limits in Condition 5.1 or 5.2.

6. The Permittee shall limit the combined hours of operation of EUs 103 and 104 in SoLoNOx mode when firing ULSD to no more than 4,000 hours[2] per 12 consecutive month period.

   Monitor, record, and report as follows:

   6.1 Monitor and record, monthly, the combined hours of operation of EUs 103 and 104 in SoLoNOx mode when firing ULSD.

   6.2 Calculate and record, monthly, the hours of operation of EUs 103 and 104 in SoLoNOx mode when firing ULSD during the previous 12 consecutive month period.

   6.3 Report in the operating report required by the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, for each month covered in the report, the total hours of operation EUs 103 and 104 in SoLoNOx mode when firing ULSD for the previous 12 consecutive month period.

   6.4 Report as excess emissions and permit deviation as described in the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, whenever the hours of operation of EUs 103 and 104 in SoLoNOx mode when firing ULSD in any 12 consecutive month period, exceed the limit in Condition 6.

[2] The hours of operation of EUs 103 and 104 when firing ULSD in SoLoNOx mode during federally required performance testing do not count towards the 4,000 hours per 12 consecutive month period limit.

Section 4 ORLs to Avoid Classification under 40 CFR 52.21(b)(23)(i)

PSD Avoidance Limits for NOx:

7. The Permittee shall limit the combined hours of operation of EUs 107 through 109 to no more than 1,500 hours per 12 consecutive month period.

   Monitor, record, and report as follows:

   7.1 Record the startup and shutdown (day and time) of EUs 107 through 109;

   7.2 Calculate and record, monthly, the total number of hours of operation for EUs 107 through 109;

   7.3 Calculate and record, monthly, the total number of hours that EUs 107 through 109 operated for the previous 12 consecutive month period;

   7.4 Report in the operating report required by the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, for each month covered in the operating report the total combined hours that EUs 107 through 109 operated for the previous 12 consecutive month period; and

   7.5 Report as excess emissions and permit deviation as described in the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, whenever the combined operating hours for EUs 107 through 109, in any 12 consecutive month period, exceed the limit in Condition 7.

8. The Permittee shall limit the hours of operation of EU 114 to no more than 500 hours per 12 consecutive month period.

   Monitor, record, and report as follows:

   8.1 Calculate and record, monthly, the total number of hours of operation for EU 114;

   8.2 Calculate and record, monthly, the total number of hours of operation for EU 114 for the previous 12 consecutive month period;

   8.3 Report in the operating report required by the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, for each month covered in the operating report the total number of hours of operation for EU 114 for the previous 12 consecutive month period; and

   8.4 Report as excess emissions and permit deviation as described in the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, whenever the hours of operation for EU 114, in any 12 consecutive month period, exceed the limit in Condition 8.

9. The Permittee shall limit the total NOx emissions from EUs 101 through 104, combined, to no more than 184 tons per 12 consecutive month period.

   Monitor, record, and report as follows:

   9.1 Monitor and record monthly, the number of hours EUs 101 through 104 operated out of SoLoNOx mode when firing fuel gas as required by Condition 5.3a;

9.2 Monitor and record monthly, the number of hours EUs 103 and 104 operated out of SoLoNOx mode when firing ULSD as required in Condition 5.3b

9.3 Monitor and record monthly, the number of hours EUs 101 and 102 operated in SoLoNOx mode;

9.4 Monitor and record monthly, the number of hours EUs 103 and 104 operated in SoLoNOx mode when firing fuel gas;

9.5 Monitor and record monthly, the number of hours EUs 103 and 104 operated in SoLoNOx mode when firing ULSD, as required in Condition 6.1;

9.6 Calculate and record, monthly, the total NOx emissions from EUs 101 through 104 using the information recorded under Conditions 9.1 through 9.5 and the appropriate NOx emission factors from Table 4;

9.7 Calculate and record the combined NOx emissions from EUs 101 through 104, by the end of each calendar month for the previous 12 consecutive month period;

9.8 Report in the operating report required by the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, for each month covered in the operating report, the 12 consecutive month total NOx emissions as recorded under Condition 9.7; and

9.9 Report as excess emissions and permit deviation as described in the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, whenever the limit in Condition 9 is exceeded.

Table 4: NOx Emission Factors for EUs 101 through 104

EUs	Fuel	Operating Mode	Emission Factor Source	Emission Factor
101 and 102	Fuel Gas	In SoLoNOx mode	Provided by Permittee and Source Test Verified [3]	4.6 lb/hr
101 through 104	Fuel Gas	Out of SoLoNOx mode		17.0 lb/hr
103 and 104	Fuel Gas	In SoLoNOx mode		6.6 lb/hr
103 and 104	ULSD	In SoLoNOx mode		34.0 lb/hr
103 and 104	ULSD	Out of SoLoNOx mode		26.4 lb/hr

10. The inlet air temperature for each of EUs 101 through 104 shall be 0°F or greater at all times, except during a cold startup of the facility where one turbine will be operated.

10.1 Monitor and record the inlet air temperature hourly;

10.2 Report as excess emissions and permit deviation as described in the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, whenever the inlet air temperature falls below 0°F, except during a cold startup of the facility.

[3] Most recent source test as of permit issuance occurred April 29 – May 4, 2018.

PSD Avoidance Limits for CO:

11. The Permittee shall limit the total CO emissions from EUs 101 through 104, combined, to no more than 200 tons per 12 consecutive month period.

    Monitor, record, and report as follows:

    11.1 Monitor and record monthly, the hours of operation of the turbines as required by Conditions 9.1 through 9.5;

    11.2 Calculate and record, monthly, the total CO emissions from EUs 101 through 104 using the information recorded under Conditions 9.1 through 9.5 and the appropriate CO emission factors from Table 5;

    11.3 Calculate and record the combined CO emissions from EUs 101 through 104, by the end of each calendar month for the previous 12 consecutive month period;

    11.4 Report in the operating report required by the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, for each month covered in the operating report, the 12 consecutive month total CO emissions as recorded under Condition 11.3; and

    11.5 Report as excess emissions and permit deviation as described in the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, whenever the limit in Condition 11 is exceeded.

Table 5: CO Emission Factors for EUs 101 through 104

EUs	Fuel	Operating Mode	Emission Factor Source	Emission Factor
101 and 102	Fuel Gas	In SoLoNOx	Provided by Permittee and Source Test Verified [3]	0.52 lb/hr
101 and 102	Fuel Gas	Out of SoLoNOx		51.60 lb/hr
103 and 104	Fuel Gas	In SoLoNOx		1.03 lb/hr
103 and 104	Fuel Gas	Out of SoLoNOx		77.40 lb/hr
103 and 104	ULSD	In SoLoNOx		1.00 lb/hr
103 and 104	ULSD	Out of SoLoNOx		47.25 lb/hr

12. Within the first 18 months of the issuance of this permit, the Permittee shall conduct a source test in accordance with the procedures specified in the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, to verify the turbine CO emission rates listed in Table 5;

    12.1 For EUs 101 and 102, conduct the tests on either EU 101 or EU 102 for at least three loads representative of the normal operating range of the EU:

        a. In SoLoNOx mode; and

        b. Out of SoLoNOx mode (the hours out of SoLoNOx mode for performance testing do not count towards the operating limit of Condition 5.1).

12.2 For EUs 103 and 104, conduct the test on either EU 103 and 104 for at least three loads representative of the normal operating range of the EU for the following operating modes when burning each fuel type:

a. In SoLoNOx mode, (the hours burning ULSD for performance testing do not count towards the operating limit of Condition 6); and

b. Out of SoLoNOx mode (the hours out of SoLoNOx mode for performance testing do not count towards the operating limit of Conditions 5.1 and 5.2)

12.3 Report as excess emissions as described in the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, if any of the emission rates determined in the source tests required by Condition 12 are higher than the emission rate for the turbines in Table 5 and the higher emission rates result in total CO emissions that exceed the limit in Condition 11.

13. The Permittee shall monitor and record the daily average temperatures at the outlet of the oxidation catalysts associated with the turbines. Except for a commissioning period of 60 days after achieving the maximum production rate to not exceed 180 days for each turbine, EUs 101 through 104, or during any subsequent cold start of the gas cycling process, or during short periods of load shifting, the Permittee shall maintain the temperature at the outlet of the catalytic bed between 750 ^{o}F and 1,100 ^{o}F while operating in SoLoNOx mode and between 450 ^{o}F and 1,100 ^{o}F while operating out of SoLoNOx mode; or temperatures established during compliance source tests.

13.1 Report in the operating report required by the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, for each month covered in the operating report the daily average outlet temperature of the catalytic bed.

13.2 Report as excess emissions as described in the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, whenever the daily average outlet temperature of the catalytic bed is outside the limits specified in Condition 13, except as provided for during initial commissioning, cold start of the gas cycling process, or during short periods of load shifting.

Section 5 ORLs to Avoid Classification under 18 AAC 50.502(c)(1)

Minor Permitting Avoidance Limits for SO_2:

14. **Diesel Fuel Sulfur Content Limits**: The Permittee shall fire only ULSD in the diesel-fired EUs listed in Table 1 except in the Used Oil-fired Heater (EU 147). Monitor, record, and report as follows:

    14.1 Obtain and keep certified receipts from fuel suppliers that confirm diesel fuel delivered to the stationary source meets the specifications of ULSD.

    14.2 Report in the operating report required by the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, that diesel fuel delivered to the stationary source during the reporting period is ULSD.

    14.3 Report in the excess emission report as described in the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, if any diesel fuel delivered to the stationary source during the reporting period did not meet the ULSD specifications.

15. **Used Oil Authorization:** The Permittee may burn used oil mixed with ULSD in EU 147 as follows:

    15.1 Measure the ash content of a representative sample of the used oil at least twice annually (no more than 7 calendar months following the previous measurement), if the heater is being operated and the most recent previous measurement is more than 7 months old, using ASTM D482 or an appropriate alternative method adopted in 18 AAC 50.035(c). Keep records of ash content measured under Condition 15.1 for five years. The records may be kept in electronic format.

    15.2 Comply with the State Particulate Matter Standard of 0.05 grains per dry standard cubic foot of exhaust gas corrected to standard conditions and averaged over three hours, by blending the used oil with ULSD using a metering system or other reproducible method accurate to plus or minus five percent at the appropriate ratio from Table 6 (use the most recent ash content measured under Condition 15.1).

    15.3 Inspect the used oil/ULSD fuel tank within five years of the effective date of Operating Permit AQ1201TVP01 to ensure that suspended solids are not accumulating in the tank. If suspended solids are present, clean the tank and report the actions taken in the operating report required by the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50.

    15.4 Record the date, quantity of used oil blended (gallons), and quantity of ULSD blended (gallons) for combustion in EU 147.

    15.5 Include in the operating report required by the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, the information required under Conditions 15.1 and 15.4.

    15.6 Report as excess emissions and permit deviation as described in the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, if

the used oil to ULSD ratio exceeds the limit in Condition 15.2 or if Conditions 15.1 through 15.5 are not met.

Table 6: Used Oil Blending Ratio

Ash Content (Percent Weight)	Blending Ratio of ULSD to One Part Used Oil
≤0.4	0.8
>0.4 and ≤0.5	1.3
>0.5 and ≤0.6	1.8
>0.6 and ≤0.7	2.2
>0.7 and ≤0.8	2.7
>0.8 and ≤0.9	3.2
>0.9 and ≤1.0	3.7
>1.0 and ≤1.1	4.2
>1.1 and ≤1.2	4.7
>1.2 and ≤1.3	5.2

16. **Fuel Gas Hydrogen Sulfide (H_2S) Content Limits**: The Permittee shall limit the H_2S content of the fuel gas fired in the turbines (EUs 101 through 104) and high pressure flare (EU 112), except for pilot and purge gas, to no more than 125 parts per million by volume (ppmv) and limit the H_2S content of all fuel gas fired in the low pressure flare (EU 113) and pilot and purge in the higher pressure flare (EU 112) to no more than 300 ppmv.

Monitor, record and report as follows:

16.1 Measure the H_2S content of the fuel gas fired in the turbines (EUs 101 through 104), high pressure flare (EU 112), and in the low pressure flare (EU 113) at least once a calendar month using ASTM D 4810-06, D 4913-89, or Gas Processors Association 2377-86, or an appropriate alternative method adopted in 18 AAC 50.035(c).

16.2 Keep records of the H_2S content measured under Condition 16.1 for five years. The records may be kept in electronic format.

16.3 Report in the operating report required by the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, the H_2S content of the fuel gas measured under Condition 16.1.

16.4 Report in the excess emission report as described in the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50 if the fuel gas H_2S content measured under Condition 16.1 exceeds the limits in Condition 16 at any time.

Section 6 Limits to Avoid Regulation Under NSPS Subpart Ec

17. **Composition of Wastes Burned in Incinerators**: Limit the amount of hospital wastes, medical wastes, and infectious wastes combusted in the waste incinerator (EU 246), to less than 10-percent by weight of the wastes and fuels combusted on a calendar quarter basis.

    Monitor, record, and report as follows:

    17.1 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 the waste incinerator. The records may be kept in electronic format.

    17.2 At the end of each calendar quarter, calculate for that calendar quarter and record the percent by weight of hospital wastes, medical wastes, and infectious wastes in the total amount of material combusted in the waste incinerator.

    17.3 Report in the operating report required by the applicable operating permit issued to the stationary source under AS 16.14 and 18 AAC 50, the percent of hospital wastes, medical wastes, and infectious wastes in the total wastes calculated in Condition 17.2 for each calendar quarter in the reporting period.

Section 7 Recordkeeping, Reporting, and Certification Requirements

18. **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 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.

    18.1 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 18.1a that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.

19. **Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall submit reports, compliance certifications, and/or other submittals required by this permit, via the Department's AOS System at http://dec.alaska.gov/applications/air/airtoolsweb using the Permittee Portal option.

    19.1 Alternatively, documents certified in accordance with Condition 18 may be submitted either by:

        a. Email under a cover letter using dec.aq.airreports@alaska.gov; or

        b. Certified mail to the following address: ADEC Air Permits Program, ATTN: Compliance Technician, 610 University Ave., Fairbanks, AK 99709-3643.

Section 8 Standard Permit Conditions

20. 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

    20.1 an enforcement action;

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

21. 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.

22. 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.

23. 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.

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

25. 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:

    25.1 enter upon the premises where an emissions unit subject to this permit is located or where records required by the permit are kept;

    25.2 have access to and copy any records required by this permit;

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

    25.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

Section 9 Permit Documentation

Date	*Documentation Details*
July 9, 2011	Department receives original application
August 16, 2011	Department receives addenda to the application
September 1, 2011	Department and ExxonMobil discuss permitting schedule at Anchorage meeting
September 23, 2011	Department determines application to be complete
November 1, 2011	Department receives addenda related to modeling analysis
January 10, 2012	Department receives addenda related to modeling analysis
February 6, 2012	Department and ExxonMobil discuss permitting schedule at Juneau meeting
March 7, 2012	Department requests and receives clarification of sulfur content of fuel gas
March 20, 2012	Department receives addenda related to modeling analysis
April 4, 2012	Department and ExxonMobil discuss permitting schedule by teleconference. Department provided a draft preliminary permit and technical analysis report for ExxonMobil to review
May 7, 2012	On Department's request, ExxonMobil provides the hourly rating of incinerators
May 8, 2012	ExxonMobil submits revised modeling to address concerns raised by the Department
June 12, 2012	The Department issues preliminary permit and technical analysis report for public comment
July 12, 2012	The Department receives Exxon Mobil Corporation comments on the preliminary permit
August 20, 2012	The Department issues PSD permit AQ1201CPT01
November 2, 2012	ExxonMobil submits application to revise PSD permit AQ1201CPT01
December 13, 2012	ExxonMobil submits addenda to the application
March 15, 2013	Department receives addenda related to modeling analysis
April 19, 2013	Department issues preliminary permit and technical analysis report for public comment
May 20, 2013	The Department receives Exxon Mobil Corporation comments on the preliminary permit
June 12, 2013	The Department issues PSD permit AQ1201CPT02
December 6, 2013	Department and ExxonMobil discuss application and permitting schedule at Juneau meeting
December 13, 2013	ExxonMobil submits application to revise PSD permit AQ1201CPT02
January 29, 2014	Department and ExxonMobil discuss permitting schedule by teleconference
March 5, 2014	Department and ExxonMobil discuss modeling analysis and permitting schedule
April 2, 2014	Department and ExxonMobil discuss permitting schedule
May 1, 2014	Department and ExxonMobil discuss permitting schedule by teleconference.

May 28, 2014	ExxonMobil provides modeling summary
June 24, 2014	Department issues preliminary permit and technical analysis report for public comment
July 24, 2014	The Department receives Exxon Mobil Corporation comments on the preliminary permit
August 7, 2014	The Department issues PSD permit AQ1201CPT03
September 3, 2014	ExxonMobil submits application to revise PSD permit AQ1201CPT03
December 8, 2014	ExxonMobil submits minor permit application to revise PSD permit AQ1201CPT03
January 14, 2015	The Department issues preliminary permit and technical analysis report for public comment
January 21, 2015	Email from Alan Schuler to Aaron Simpson regarding material errors in AQ1201CPT03
January 23, 2015	The Department revokes AQ1201CPT03 and issues AQ1201CPT03, Revision 1
February 13, 2015	The Department receives Exxon Mobil Corporation comments on the preliminary permit
February 27, 2015	The Department issues minor permit AQ1201MSS03
March 23, 2015	ExxonMobil informs Department of technical errors in minor permit AQ1201MSS03
March 27, 2015	The Department issues minor permit AQ1201MSS03 Revision 1
January 27, 2016	The Department receives application to revise AQ1201MSS03 Revision 1
March 4, 2016	The Department issues minor permit AQ1201MSS03 Revision 2
May 19, 2016	The Department receives application to revise AQ1201MSS03 Revision 2
June 20, 2016	The Department issues minor permit AQ1201MSS03 Revision 3
July 12, 2016	The Department receives application to revise AQ1201MSS03 Revision 3
August 12, 2016	The Department receives application to revise AQ1201MSS03 Revision 4
August 26, 2016	The Department issues minor permit AQ1201MSS03 Revision 4
September 19, 2016	The Department receives supplement to the application to revise AQ1201MSS03 Revision 4
January 26, 2017	The Department issues preliminary minor permit AQ1201MSS03 Revision 5
February 27, 2017	The Department receives EMAP comments on the preliminary permit
April 17, 2017	The Department issues minor permit AQ1201MSS03 Revision 5
December 13, 2018	The Department receives EMAP application to revise AQ1201MSS03 Revision 5
April 1, 2019	The Department receives EMAP application addendum for NOx emission rates from the turbines and quantitative ambient air quality impact analysis

Attachment 1 - Ambient Air Access Control Plan

Point Thomson Production Facility Central Pad

Introduction

ExxonMobil Alaska Production Inc. (EMAP) is developing the Point Thomson field located along the Beaufort Sea, on the eastern North Slope of Alaska. The permitted area for Point Thomson is located on lands leased from the State of Alaska. Access to Central Pad will be by aircraft, barge, and/or ice roads. The nearest villages to Central Pad are Kaktovik, which is approximately 100 kilometers (km) east and Nuiqsut, which is approximately 180 km west. This plan describes the Public Access Control Plan that will be used to maintain the ambient air quality boundary at the Point Thomson Central Pad.

Site access to Point Thomson is naturally limited due to its remote location and because it will not be connected to other North Slope areas or communities by a permanent road. Some subsistence use of the nearby offshore and onshore area occurs, and local residents may occasionally pass by Point Thomson. EMAP understands the need to provide safe havens during emergencies and for those in need of assistance. Access will be provided in these cases as necessary without compromising site control, safety, or the ambient air quality boundary.

Ambient Air

EMAP is fully committed to meeting the applicable Alaska Ambient Air Quality Standards (AAAQS) and increments at the ambient air quality boundary of the project. The purposes of this plan are to delineate the area to be protected and controlled for occupational health and safety (within the ambient air quality boundary) from the area that is subject to unrestricted, general public access in which the AAAQS and increments are applicable (outside the ambient air quality boundary), and to ensure that measures are in place to restrict public access within the ambient air quality boundary.

EPA defines ambient air as that portion of the atmosphere, external to buildings, to which the general public has access. For the purpose of modeling source emissions, the area to which EMAP controls public access is not ambient air. Therefore, the outside of the pad edges represent the ambient air quality boundary. To maintain the ambient air boundary, and still provide for emergency public access, a public access corridor has been established on the south boundary of the Central Pad (Figure 1). For purposes of air quality modeling and impact assessment, this access corridor has been used as the ambient air quality boundary. Dispersion modeling has been conducted and demonstrates modeled compliance with all applicable AAAQS and increments at all points on and outside of the ambient air quality boundary.

Access Control

EMAP security procedures will control site access and provide a method for monitoring personnel movements. An adequate number of guards will be provided to ensure 24-hour security coverage 7 days a week. Visitors to the site shall receive a site specific safety, security, environmental and health orientation briefing conducted as soon as possible after arriving at the site. This briefing will include review of ambient air issues.

Public access to Central Pad will be controlled by a security office. The land within the ambient air quality boundary encompasses Central Pad. Access to Central Pad is from a road which connects Central Pad to the airstrip. The security office is located on the road at the entrance to Central Pad. The Central Pad berm is approximately 5 feet in height, which creates a physical barrier.

During winter when access to the facilities may be available by ice road, security guards will be placed at the Endicott entrance of the ice road to control access. Security plans include controlling direct site access to the roads, pads, and airstrip; access to ice roads; and the helipad and airstrip.

Operations and maintenance personnel will be on site during all active operating periods to maintain security. A security system will be installed to monitor select areas on Central Pad. Onsite personnel will be responsible for controlling direct site access. Visitors wishing to access the site: should have approval prior to arrival, will be required to sign in upon arrival, and will be required to attend a safety briefing.

The most likely people requiring assistance will be from the village of Kaktovik. EMAP maintains onsite subsistence representatives from Kaktovik, who will be trained in the need to maintain an ambient air quality boundary. In addition, EMAP employs a Kaktovik Village Liaison, who is based in Kaktovik. The Liaison will work with the community of Kaktovik to understand residents' travel plans and will notify Central Pad Subsistence Representatives and Security when subsistence users or snow machine users plan to be in the Point Thomson area. In addition, the issue will be reviewed with the City of Kaktovik's Oil and Gas Liaison.

Figure 1 – Public Access Corridor Established on the South Boundary of the Central Pad