DEPARTMENT OF ENVIRONMENTAL CONSERVATION AIR QUALITY OPERATING PERMIT

Permit No. AQ0068TVP04

Issue Date: Public Comment - October 29, 2020 Expiration Date: Five Years

The Alaska Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, **Hilcorp Alaska, LLC**, for the operation of the **King Salmon Platform**.

This permit satisfies the obligation of the owner and operator to obtain an operating permit as set out in AS 46.14.130(b).

As set out in AS 46.14.120(c), the Permittee shall comply with the terms and conditions of this operating permit.

All currently applicable stationary source-specific terms and conditions of Air Quality Control Construction Permit 0123-AC008, and Minor Permits AQ0068MSS03 and AQ0068MSS04 have been incorporated into this operating permit.

Citations listed herein are contained within the effective version of 18 AAC 50 at permit issuance. All federal regulation citations are from those sections adopted by reference in this version of regulation in 18 AAC 50.040 unless otherwise specified.

Upon effective date of this permit, Operating Permit AQ0068TVP03 expires.

This operating permit becomes effective <insert date—30 days after issue date>.

James R. Plosay, Manager Air Permits Program

Table of Contents

	List of Abbreviations Used in this Permit	iv
Section 1.	Stationary Source Information	1
	Identification	1
Section 2.	Emissions Unit Inventory and Description	2
Section 3.	State Requirements	5
	Visible Emissions Standards	5
	Visible Emissions Monitoring, Recordkeeping and Reporting (MR&R)	6
	Particulate Matter (PM) Emissions Standards	10
	PM MR&R	11
	Sulfur Compound Emission Standards Requirements	14
	Sulfur Compound MR&R	14
	Pre-construction Permit Requirements	16
	Insignificant Emissions Units	25
Section 4.	Federal Requirements	26
	40 C.F.R. Part 60 New Source Performance Standards (NSPS)	26
	NSPS Subpart A – General Provisions	26
	NSPS Subpart GG – Turbines, EU IDs 1, 4, and 22	29
	NSPS Subpart IIII – Compression Ignition Internal Combustion Engines (CI ICE), EU IDs 12a, 14, and 53	38
	40 C.F.R. Part 63 National Emission Standards for Hazardous Air Pollutants (NESHAP)	43
	NESHAP Subpart A – General Provisions	43
	NESHAP Subpart ZZZZ – Stationary RICE, EU IDs 11, 12a, 13, 14, 15, 20, 53.	and 43
	40 C.F.R. Part 61 NESHAP	46
	Subpart A (General Provisions) and Subpart M (Asbestos)	46
	40 C.F.R. Part 82 Protection of Stratospheric Ozone	46
	40 C.F.R. 63 NESHAP Applicability Determinations	47
Section 5.	General Conditions	48
	Standard Terms and Conditions	48
	Open Burning Requirements	51
Section 6.	General Source Testing and Monitoring Requirements	52
Section 7.	General Recordkeeping and Reporting Requirements	55

	Recordkeeping Requirements	55
	Reporting Requirements	55
Section 8.	Permit Changes and Renewal	61
Section 9.	Compliance Requirements	63
	General Compliance Requirements	63
Section 10.	Permit As Shield from Inapplicable Requirements	65
Section 11.	Visible Emissions Forms	69
Section 12.	Material Balance Calculation	71
Section 13.	ADEC Notification Form	72

List of Abbreviations Used in this Permit

AAC	Alaska Administrative Code.
AAAQS	Alaska Ambient Air Quality.
	Standards
ADEC	Alaska Department of
	Environmental Conservation
AS	Alaska Statutes
ASTM	American Society for Testing and
1.00 1111 11111111111111111111111111111	Materials
BACT	Best Available Control Technology
hHn	Brake Horsepower
$C\Delta\Delta$ or The Δct	Clean Air Act
CER	Code of Federal Regulations
CI	compression ignition
CO	Carbon Monovida
CO	CO equivalent
	A_{12} -equivalent
Department	Alaska Department of
1 0	Environmental Conservation
dsct	.Dry standard cubic foot
ЕРА	.US Environmental Protection
	Agency
EU	.Emissions unit
gr./dscf	.grain per dry standard cubic foot (1
	pound = 7000 grains)
GAPCP	.Good Air Pollution Control
	Practices
GHG	.Greenhouse Gas
GPH	.gallons per hour
H ₂ S	.hydrogen sulfide
HAPs	Hazardous Air Pollutants [HAPs as
	defined in AS 46.14.990]
НС	.hvdrocarbons
Hn	Horsepower
ICE	internal combustion engine
ID	Emissions unit Identification
10	Number
ĿW	kiloWatts
	Lowest Achievable Emission Pate
LAEK	Movimum Ashiovable Control
MAC1	Maximum Achievable Control
	Technology [as defined in 40 C.F.R.
	[63]
MMBtu/hr	.Million British thermal units per
	hour
MR&R	.Monitoring, Recordkeeping, and
	Reporting
NA	.Not applicable
NRE	.Nonroad engine

NAICS	.North American Industrial
	Classification System
NESHAP	.Federal National Emission
	Standards for Hazardous Air
	Pollutants [NESHAP as contained in
	40 C.F.R. 61 and 63]
NG	.Natural Gas
NH3	. ammonia
NO _x	.Nitrogen Oxides
NSPS	.Federal New Source Performance
	Standards [NSPS as contained in
	40 C.F.R. 60]
O ₂	Oxygen
PAL	Plantwide Applicability Limitation
Ph	lead
PM	Particulate Matter
PM ₁₀	Particulate matter less than or equal
1 10110	to a nominal 10 microns in diameter
PM ₂₅	Particulate matter less than or equal
11112.5	to a nominal 2.5 microns in diameter
nnm	Parts per million
ppm	Parts per million by volume on a dry
ppint, ppinta	hasis
nnmw	Parts per million by weight
nsia	Pounds per Square Inch (absolute)
PSIG	Prevention of Significant
150	Deterioration
PTF	Potential to Emit
RICE	Reciprocating Internal Combustion
	Fngine
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO ₂	Sulfur dioxide
SPC	Standard Permit Condition or
51 C	Standard Operating Permit
	Condition
ASPB	A stroke rich burn
45KD	to be determined
TDD	Tons per year
VOC	volatile organic compound [VOC as
VOC	defined in 40 C E P 51 100(a)]
VOI	volatila organia liquid [VOL as
VOL	defined in 40 C E P 60 111h
	Subport Khl
vo10/	Subpart KUJ
v01%	. volume percent
wt%0	weight percent of suffer in fact
wt%D _{fuel}	weight percent of suffur in fuel

Section 1. Stationary Source Information

Identification

Permittee:		Hilcorp Alaska, LLC 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503		
Stationary Source	Name:	King Salmon Platform		
Location:		60° 51′ 54" North Latitude; 151° 36′ 18" West Longitude		
Physical Address:		Upper Cook Inlet, AK		
Owner/Operator		Hilcorp Alaska, LLC 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503		
Permittee's Responsible Officials:		David S. Wilkins, Senior Vice President Vanessa Hughes, Asset Team Leader Matt Brown, Asset Team Leader Jennifer Starck, Asset Team Leader 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503		
Designated Agent:		CT Corporation System 9360 Glacier Highway, Suite 202 Juneau, AK 99801		
Stationary Source and Building Contact:		Dan Marlowe, Area Operations Manager 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503 (907) 777-8300 dmarlowe@hilcorp.com		
Permit Contact:		Greg Arthur, Senior Environmental Specialist 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503 (907) 777-8509 greg.arthur@hilcorp.com		
Fee Contact:		Hilcorp Alaska, LLC Accounts Payable PO Box 61529 Houston, TX 77208 (907) 777-8300		
Process SIC Code		1311 - Crude Petroleum and Natural Gas		
Description:	NAICS Code:	211111 - Crude Petroleum and Natural Gas Extraction		

[18 AAC 50.040(j)(3) & 50.326(a)] [40 C.F.R. 71.5(c)(1) & (2)]

Section 2. Emissions Unit Inventory and Description

Emissions units listed in Table A and Table B have specific monitoring, recordkeeping, or reporting conditions in this permit. Emissions unit descriptions and ratings are given for identification purposes only.

EU ID	Tag Number	Emissions Unit Name	Emissions Unit Description	Fuel Type	Rating/Size	Installation or Construction Date
1	L-PM- 1420	Solar Centaur T4000	Waterflood Pump Drive Turbine	Fuel Gas	36.3 MMBtu/hr (3,830 hp)	1981
4	L-PM- 4010	Solar Centaur 40-T4700S	ESP Generator Turbine (SoLoNOx)	Fuel Gas	42.8 MMBtu/hr (3,320 kW)	2002
5	L-PM- 0670	Solar Saturn T1100	York Compressor Drive Turbine	Fuel Gas	12.3 MMBtu/hr (1,100 hp)	1969
11	L-PM- 2420	GM 16-645E1	Engine Drilling Generator #2	Diesel	1,676 hp (1,250 kW)	1967
12a	L-CR- 1020	Caterpillar C15 DITA	Crane East	Diesel	580 Hp	2013
13	L-CR- 1010	Detroit Diesel 671 Engine	Clyde MC6000 Crane West	Diesel	200 Hp	1967
14	L-PM- 2210	John Deere Engine	Emergency Fire Pump Drive	Diesel	175 Hp	2006 ²
15	L-G-2400	Caterpillar 3304 Engine	Standby AC Generator Drive	Diesel	135 Hp	1967
16	L-SE-NE	Flare-Northeast	(HP/LP/Relief) NE	Fuel Gas	8.76 MMCF/yr (pilot/purge) ⁴	2012
18a ⁶		Bradford-White	Hydronic Boiler #1	Fuel Gas	3.0 MMBtu/hr	2020
18b ⁶		Bradford-White	Hydronic Boiler #2	Fuel Gas	3.0 MMBtu/hr	2020
19a ⁶		Bradford-White	Hydronic Boiler #3	Fuel Gas	3.0 MMBtu/hr	2020
20	None	Deutz Model F3L912	Air Compressor Engine	Diesel	52 Hp	1986
22 ³	None	Solar Centaur 50	Turbine (SoLoNOx)	Fuel Gas	4,600 kW	1986 ⁵
52	None	Solar Taurus	Turbine	Fuel Gas	1,200 Hp	Pre October 3, 1977 ⁵
53	None	Detroit Diesel	Emergency Engine	Diesel	685 Hp	2014 ⁵

Table A - Emissions Unit Inventory¹

Notes:

- 1. EU ID 21 (50-hp Cummins 6A3-4-G1 emergency generator engine) is no longer included in this inventory; the EU has been removed from service since 2016.
- 2. In 2006, the Detroit Diesel 671 permitted as EU ID 14 in Permit to Operate 9423-AA005 was replaced by a John Deere Engine.
- 3. EU IDs 6 and 7 (Ruston TA-1750 Turbines) were removed from the stationary source upon installation of the replacement EU ID 22 in November 2016.
- 4. Flare rating other than pilot and purge is 440 MMscf/year.
- 5. The dates shown for EU IDs 22, 52 and 53 are construction dates of the emissions units for purposes of NSPS Subparts GG and IIII applicability determination.
- 6. EU IDs 18a, 18b, and 19a replaced EU IDs 18 and 19, per October 2, 2020 Off-Permit Change Notification. These units are expected to be in service starting October 5, 2020.

[18 AAC 50.326(a)] [40 C.F.R. 71.5(c)(3)]

EU ID	Emissions Unit Description	Fuel Type	Rating/ Size	Installation Date		
POGO H	POGO Heaters					
23	Heater 1	Fuel Gas	2.5 MMBtu/hr	Rotates on/off		
24	Heater 2	Diesel	1.0 MMBtu/hr	Rotates on/off		
25	Heater 3	Diesel	1.0 MMBtu/hr	Rotates on/off		
30	Heater 6	Diesel	5.8 MMBtu/hr	Rotates on/off		
31	Heater 7	Diesel	5.8 MMBtu/hr	Rotates on/off		
32	Heater 8	Diesel	5.8 MMBtu/hr	Rotates on/off		
33	Heater 9	Diesel	5.8 MMBtu/hr	Rotates on/off		
34	Heater 10	Diesel	7.5 MMBtu/hr	Rotates on/off		
35	Heater 11	Diesel	7.5 MMBtu/hr	Rotates on/off		
36	Heater 12	Diesel	7.5 MMBtu/hr	Rotates on/off		
37	Heater 13	Diesel	7.5 MMBtu/hr	Rotates on/off		
38	Heater 14	Diesel	7.5 MMBtu/hr	Rotates on/off		
39	Heater 15	Diesel	7.5 MMBtu/hr	Rotates on/off		
POGO N	onroad Engines (NREs)					
26	Pump Engine No. 1	Diesel	785 Hp	NA		
27	Pump Engine No. 2	Diesel	785 Hp	NA		
28	Hydraulic PowerPack No. 1	Diesel	630 Hp	NA		
29	Hydraulic PowerPack No. 2	Diesel	630 Hp	NA		
40	Hydraulic Power Pack Tongs No. 1	Diesel	88 Hp	NA		

Table B – Portable Oil and Gas Operation $(POGO)^1$

EU ID	Emissions Unit Description	Fuel Type	Rating/ Size	Installation Date
41	Hydraulic Power Pack Tongs No. 2	Diesel	88 Hp	NA
42	Eline "Kit"	Diesel	142 Hp	NA
43	Eline "Kit"	Diesel	31 Hp	NA
44	Pressure Washer No. 1	Diesel	0.324 MMBtu/hr	NA
45	Pressure Washer No. 2	Diesel	0.324 MMBtu/hr	NA
46	Pressure Washer No. 3	Diesel	0.324 MMBtu/hr	NA
47	Air Compressor	Diesel	29 Hp	NA
48	Portable Light Plants	Diesel	50 Hp	NA
49	Portable Light Plants	Diesel	50 Hp	NA
50	Portable Light Plants	Diesel	50 Hp	NA
51	Portable Light Plants	Diesel	50 Hp	NA

[18 AAC 50.326(a)]

[40 C.F.R. 71.5(c)(3)] [Minor Permit AQ0068MSS03 Table 1, 4/7/2015]

Section 3. State Requirements

Visible Emissions Standards

1. Industrial Process and Fuel-Burning Equipment Visible Emissions. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from EU IDs 1, 4, 5, 11,12a, 13 through 16, 18a, 18b, 19a, 20, 22, 52, and 53 listed in Table A, and EU IDs 23 through 25, and 30 through 39 listed in Table B, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3), & 50.346(c)] [40 C.F.R. 71.6(a)(1)]

- 1.1. For EU IDs 1, 4, 5, 18a, 18b, 19a, 22, 23, and 52, burn only gas as fuel. In each operating report under Condition 88 indicating whether each of these emissions units burned only gas during the period covered by the report. Report under Condition 87 if any fuel other than gas is burned in any of these emissions units.
- 1.2. For EU IDs 12a and 13, monitor, record and report in accordance with Conditions 2 through 4.
- 1.3. For EU ID 14, as long as the emissions unit does not exceed the operational hour limit in Condition 24, monitoring shall consist of an annual compliance certification under Condition 89 for the visible emissions standard based on reasonable inquiry. Otherwise, comply with Condition 1.4.
- 1.4. For each of EU IDs 11, 14, 15, 20, and 53, as long as the emissions unit does not exceed the operational hours shown in Table C, which are equivalent to the significant emissions thresholds listed in 18 AAC 50.326(e),¹ monitoring shall consist of an annual compliance certification under Condition 89 with the visible emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 88 if any of EU IDs 11, 14, 15, 20, and 53 reaches any of the significant emissions thresholds listed in 18 AAC 50.326(e) and monitor, record, and report in accordance with Conditions 2 through 4 for the remainder of the permit term for that emissions unit.

EU ID	EU Description	Operational Hours/ rolling 12-month period
11	1,676 Hp, Engine Drilling Generator #2, intermittently operated	99
14	175 Hp, Diesel Emergency Fire Pump Drive engine	1,901
15	135 Hp, Diesel Standby AC Generator Drive engine	950
20	52 Hp, Diesel Air Compressor engine, intermittently operated	2,468
53	685 Hp, Diesel Emergency Engine	759

	~ .			
Tahla (' _ Onarational	Hours Correspond	ling to Significant	t Emissions Threshold	c
1 able C = Operational	mours correspond	ing to significan	i Linissions i micsuolu	3

1.5. For the flare, EU ID 16, monitor, record and report in accordance with Condition 5.

¹ Operational hours corresponding to 2 TPY NO_x (worst-case significant emissions threshold listed in 18 AAC 50.326(e)) based on the emission factors used to calculate Potential to Emit (PTE) operating at full load, per rolling 12-month period.

- 1.6. For each of the portable heaters, EU IDs 24, 25, and 30 through 39, the Permittee shall monitor, record, and report as follows:
 - a. Verify the initial compliance of EU IDs 24, 25, and 30 through 39 by either:
 - (i) Obtaining a certified manufacturer guarantee that the emissions unit will comply with the visible emission standard; or
 - (ii) Conducting a Method 9 visible emission source test, following 40 C.F.R.
 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations source test, within 30 days after beginning unit operation. Record and report in accordance with Conditions 3 and 4.

```
[18 AAC 50.040(j)(4), 50.055(a)(1), 50.326(j)(3) & (4), and 50.346(c)]
[40 C.F.R. 71.6(a)(3), & (c)(6)]
[Condition 5.2, Minor Permit AQ0068MSS03, 4/7/2015]
```

Visible Emissions Monitoring, Recordkeeping and Reporting (MR&R)

Liquid Fuel-Burning Equipment

2. Visible Emissions Monitoring. When required by any of Conditions 1.2 through 1.4, or in the event of replacement² during the permit term, the Permittee shall observe the exhaust of each of EU IDs 11, 12a, 13, 14, 15, 20, and 53 for visible emissions using the Method 9 Plan under Condition 2.2.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)] [40 C.F.R. 71.6(a)(3)(i)]

- 2.1. The Permittee may, for each unit, elect to continue the visible emissions monitoring schedule specified in Conditions 2.2.b through 2.2.e that remains in effect from a previous permit.
- 2.2. **Method 9 Plan.** For all observations in this plan, observe emissions unit exhaust following 40 C.F.R. 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations.³
 - a. <u>First Method 9 Observation</u>. Except as provided in Condition 2.1, observe the exhausts of EU IDs 11, 12a, 13, 14, 15, 20, and 53 according to the following criteria:
 - (i) Except as provided in Condition 2.2.a(ii), for EU IDs 12a or 13, observe exhaust within six months after the effective date of this permit.
 - (ii) For any unit replaced, observe exhaust within 60 days of the newly installed emissions unit becoming fully operational.⁴ Except as provided in Condition 2.2.e, after the First Method 9 observation:

² "*Replacement*," as defined in 40 C.F.R. 51.166(b)(32).

³ Visible emissions observations are not required during emergency operations.

⁴ *"Fully operational"* means upon completion of all functionality checks and commissioning after unit installation. *"Installation"* is complete when the unit is ready for functionality checks to begin.

- (A) For EU IDs 12a and 13, continue with the monitoring schedule of the replaced emissions unit; and
- (B) For EU IDs 11, 14, 15, 20, and 53, comply with Conditions 1.3 and 1.4, as applicable.
- (iii) For each of EU IDs 11, 14, 15, 20, and 53, observe the exhaust of the emissions unit within 30 days after the end of the calendar month during which monitoring was triggered under Condition 1.4; or for an emissions unit with intermittent operations, within the first 30 days during the unit's next scheduled operation..
- b. <u>Monthly Method 9 Observations.</u> After the first Method 9 observation conducted under Condition 2.2.a, perform observations at least once in each calendar month that the emissions unit operates.
- c. <u>Semiannual Method 9 Observations</u>. After at least three monthly observations under Condition 2.2.b unless a six-consecutive-minute average opacity is greater than 15 percent and one or more individual observations are greater than 20 percent, perform semiannual observations
 - (i) no later than seven months, but not earlier than five months, after the preceding observation; or
 - (ii) for an emissions unit with intermittent operations, during the next scheduled operation immediately following seven months after the preceding observation.
- d. <u>Annual Method 9 Observations.</u> After at least two semiannual observations under Condition 2.2.c, unless a six-consecutive-minute average opacity is greater than 15 percent and one or more individual observations are greater than 20 percent, perform annual observations
 - (i) no later than 12 months, but not earlier than 10 months, after the preceding observation; or
 - (ii) for an emissions unit with intermittent operations, during the next scheduled operation immediately following 14 months after the preceding observation.
- e. <u>Increased Method 9 Frequency.</u> If a six-consecutive-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more individual observations are greater than 20 percent, then increase or maintain the observation frequency for that emissions unit to at least monthly intervals as described in Condition 2.2.b, and continue monitoring in accordance with the Method 9 Plan.
- 3. Visible Emissions Recordkeeping. The Permittee shall keep records as follows:
 - 3.1. For all Method 9 observations,

- a. the observer shall record the following:
 - the name of the stationary source, emissions unit and location, emissions unit type, observer's name and affiliation, and the date on the Visible Emissions Observation Form in Section 11;
 - (ii) the time, estimated distance to the emissions location, sun location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate or best estimate, if unknown) on the sheet at the time opacity observations are initiated and completed;
 - (iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;
 - (iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation Form in Section 11; and
 - (v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.
- b. To determine the six-consecutive-minute average opacity,
 - (i) divide the observations recorded on the record sheet into sets of 24 consecutive observations;
 - (ii) sets need not be consecutive in time and in no case shall two sets overlap;
 - (iii) for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; and
 - (iv) record the average opacity on the sheet.
- c. Calculate and record the highest six-consecutive- and 18-consecutive-minute average opacities observed.
- 3.2. The records may be kept in electronic format.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)] [40 C.F.R. 71.6(a)(3)(ii)]

4. Visible Emissions Reporting. The Permittee shall report visible emissions as follows:

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)] [40 C.F.R. 71.6(a)(3)(iii)]

- 4.1. In the first operating report required in Condition 88 under this permit term, the Permittee shall state the intention to either continue the visible emissions monitoring schedule in effect from the previous permit or reset the visible emissions monitoring schedule.
- 4.2. Include in each operating report under Condition 88 for the period covered by the report:
 - a. for all Method 9 observations:
 - (i) copies of the observation results (i.e. opacity observations) for each emissions unit, except for the observations the Permittee has already supplied to the Department; and
 - (ii) a summary to include:
 - (A) number of days observations were made;
 - (B) highest six-consecutive- and 18-consecutive-minute average opacities observed; and
 - (C) dates when one or more observed six-consecutive-minute average observed were greater than 20 percent; and
 - b. a summary of any monitoring or recordkeeping required under Conditions 2 and 3 that was not done.
- 4.3. Report under Condition 87:
 - a. the results of Method 9 observations that exceed 20 percent average opacity for any six-consecutive-minute period; and
 - b. if any monitoring under Condition 2 was not performed when required, report within three days of the date the monitoring was required.

Flares

- 5. Visible Emissions MR&R. The Permittee shall monitor, record, and report as follows:
 - 5.1. Observe flare events⁵ on EU ID 16, for visible emissions following 40 C.F.R. 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations according to the following schedule:
 - a. Conduct an initial visible emissions observation on EU ID 16 within 12 months of the effective date of this permit.

⁵ For purposes of this permit, a *"flare event"* is flaring of gas during daylight for greater than one hour as a result of scheduled release operations; i.e., maintenance or well testing activities. It does not include non-scheduled release operations, i.e. process upsets, emergency flaring, or de-minimis venting of gas incidental to normal operations.

- b. Conduct subsequent visible emissions observations within 14 months of, but not earlier than three months after, the preceding flare event visible emissions observation.
- c. If there are no flare events that meet the requirements of Condition 5.1.a or 5.1.b, the Permittee shall observe the next daylight flare event.
- 5.2. Record the following information for observed events:
 - a. the flare EU ID number;
 - b. results of the Method 9 observations;
 - c. reason for flaring;
 - d. date, beginning and ending time of event; and
 - e. volume of gas flared.
- 5.3. The records required by Condition 5.2 may be kept in electronic format.
- 5.4. Monitoring of a flare event may be postponed for safety or weather reasons, or because a qualified observer is not available.
- 5.5. Include the following in the operating report required by Condition 88 for the period covered by the report:
 - a. copies of the records required by Condition 5.2; and
 - b. if an annual flare event observation required by Condition 5.1.a or Condition 5.1.b has not been fulfilled for the year and/or monitoring of a flare event is postponed, an explanation of the reason the event was not monitored.
- 5.6. Report under Condition 87
 - a. whenever the opacity standard in Condition 1 is exceeded; or
 - b. the monitoring required under Condition 5.1 is not completed, except as allowed under Condition 5.4.
- 5.7. If no flare events are monitored during a certification period, the Permittee shall certify compliance under Condition 89 with the visible emissions standard in Condition 1 based on reasonable inquiry.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)] [40 C.F.R. 71.6(a)(3)(i) - (iii)]

Particulate Matter (PM) Emissions Standards

6. Industrial Process and Fuel-Burning Equipment PM Emissions. The Permittee shall not cause or allow particulate matter emitted from EU IDs 1, 4, 5, 11,12a, 13 through 16, 18a, 18b, 19a, 20, 22, 52, and 53 listed in Table A, and EU IDs 23 through 25, and 30 through 39 listed in Table B, to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3), & 50.346(c)] [40 C.F.R. 71.6(a)(1)]

- 6.1. For EU IDs 1, 4, 5, 18a, 18b, 19a, 22, 23, and 52, comply with Condition 1.1.
- 6.2. For EU IDs 12a and 13, monitor, record and report in accordance with Conditions 7 through 9.
- 6.3. For EU ID 14, as long as the emissions unit does not exceed the operational hour limit in Condition 24, monitoring shall consist of an annual compliance certification under Condition 89 for the PM emissions standard based on reasonable inquiry. Otherwise, comply with Condition 6.4.
- 6.4. For each of EU IDs 11, 14, 15, 20, and 53, as long as the emissions unit does not exceed the operational hours, shown in Table C, which are equivalent to the significant emissions thresholds listed in 18 AAC 50.326(e),⁶ monitoring shall consist of an annual compliance certification under Condition 89 with the PM emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 88 if any of EU IDs11, 14, 15, 20, and 53 reaches any of the significant emissions thresholds and monitor, record, and report in accordance with Conditions 7 through 9 for the remainder of the permit term for that emissions unit.
- 6.5. For the flare, EU ID 16, the Permittee shall comply with Condition 5.
- 6.6. For each of the portable heaters, EU IDs 24, 25, and 30 through 39, the Permittee shall monitor, record, and report in accordance with Conditions 10 through 12.

[18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3), and 50.346(c)] [40 C.F.R. 71.6(a)(3)]

PM MR&R

Liquid Fuel-Burning Engines and Turbines

7. Particulate Matter Monitoring. The Permittee shall conduct source tests on the diesel engines, EU IDs 12a and 13 and EU IDs 11, 14, 15, 20, and 53 (when required by Condition 6.4), to determine the concentration of PM in the exhaust of each of the emissions units as follows:

[18 AAC 50.040(j)(4), 50.326(j)(3) & (4), and 50.346(c)] [40 C.F.R. 71.6(a)(3)(i) & (c)(6)]

7.1. If the result of any Method 9 observation conducted under Condition 2.2 for any of EU IDs 12a and 13 and EU IDs 11, 14, 15, 20, and 53 is greater than the criteria of Condition 7.2.a or Condition 7.2.b, the Permittee shall, within six months of that Method 9 observation, either:

⁶ Operational hours corresponding to 2 TPY NO_x (worst-case significant emissions threshold listed in 18 AAC 50.326(e)) based on the emission factors used to calculate Potential to Emit (PTE) operating at full load, per rolling 12-month period.

- take corrective action and observe the emissions unit exhaust under load conditions comparable to those when the criteria were exceeded, following 40 C.F.R. 60, Appendix A-4 Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations, to show that emissions are no longer greater than the criteria of Condition 7.2; or
- b. except as exempted under Condition 7.4, conduct a PM source test according to requirements set out in Section 6.
- 7.2. Take corrective action or conduct a PM source test, in accordance with Condition 7.1, if any Method 9 observation under Condition 2.2 results in an 18-minute average opacity greater than
 - a. 20 percent for an emissions unit with an exhaust stack diameter that is equal to or greater than 18 inches; or
 - b. 15 percent for an emissions unit with an exhaust stack diameter that is less than 18 inches, unless the Department has waived this requirement in writing.
- 7.3. During each one-hour PM source test run under Condition 7.1.b, observe the emissions unit exhaust for 60 minutes in accordance with Method 9 and calculate the highest 18-consecutive-minute average opacity that was measured during each one-hour test run. Submit a copy of these observations with the source test report.
- 7.4. The PM source test requirements in Condition 7.1.b are waived for an emissions unit if
 - a. a PM source test on that unit has shown compliance with the PM standard during this permit term; or
 - b. corrective action was taken to reduce visible emissions and two consecutive 18-minute Method 9 visible emissions observations (as described in Condition 2.3) conducted thereafter within a six-month period show visible emissions less than the threshold in Condition 7.2.
- **8. PM Recordkeeping.** The Permittee shall keep records of the results of any source test and visible emissions observations conducted under Condition 7.

[18 AAC 50.040(j)(4), 50.326(j)(3), and 50.346(c)] [40 C.F.R. 71.6(a)(3)(ii)]

- 9. **PM Reporting**. The Permittee shall report as follows:
 - 9.1. Notify the Department of any Method 9 observation results that are greater than the threshold of either Condition 7.2.a or 7.2.b within 30 days of the end of the month in which the observations occurred. Include the dates, EU ID(s), and results when an observed 18-minute average opacity was greater than an applicable threshold in Condition 7.2.
 - 9.2. In each operating report under Condition 88, include:

- a. a summary of the results of any PM source test and visible emissions observations under Condition 7; and
- b. copies of any visible emissions observation results greater than the thresholds of Condition 7.2, if they were not already submitted.
- 9.3. Report under Condition 87
 - a. anytime the results of a PM source test exceed the PM emissions standard in Condition 6; or
 - b. if the requirements under Condition 7.1 were triggered and the Permittee did not comply on time with either Condition 7.1.a or 7.1.b. Report the deviation within 24 hours of the date compliance with Condition 7.1 was required.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)] [40 C.F.R. 71.6(a)(3)(iii)]

Liquid Fuel-Burning Heaters

10. PM Monitoring. The Permittee shall conduct source tests on EU IDs 24, 25, 30 through 39 to determine the concentration of PM in the exhaust of each emissions unit as follows:

18 AAC 50.040(j)(4), 50.326(j)(3) & (4), and 50.346(c)] [40 C.F.R. 71.6(a)(3)(i) & (c)(6)]

- 10.1. If the result of any Method 9 observation conducted under Condition 1.6.a(ii) for any of EU IDs 24, 25, 30 through 39 results in an 18-minute average opacity greater than 20 percent opacity, the Permittee shall, within six months of that Method 9 observation, either:
 - take corrective action and observe the emissions unit exhaust under load conditions comparable to those when the criteria were exceeded, following 40 C.F.R. 60, Appendix A-4 Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations, to show that emissions are no longer greater than an 18-minute average opacity of 20 percent; or
 - b. except as exempted under Condition 10.3, conduct a PM source test according to the requirements in Section 6.
- 10.2. During each one-hour PM source test run under Condition 10.1, observe the emissions unit exhaust for 60 minutes in accordance with Method 9 and calculate the highest 18-consecutive-minute average opacity measured during each one-hour test run. Submit a copy of these observations with the source test report.
- 10.3. The PM source test requirement in Condition 10.1 is waived for an emissions unit if:
 - a. a source test on that unit has shown compliance with the PM standard during this permit term, or

b. corrective action was taken to reduce visible emissions and two consecutive 18-minute Method 9 visible emissions observations (as described in Condition 2.2) conducted thereafter within a six-month period show visible emissions less than the threshold in Condition 10.1.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)] [40 C.F.R. 71.6(a)(3)(i)]

11. PM Recordkeeping. The Permittee shall keep records of the results of any source test and visible emissions observations conducted under Condition 10.

[18 AAC 50.040(j)(4), 50.326(j)(3) & (4), & 50.346(c)] [40 C.F.R. 71.6(a)(3)(ii)]

- **12. PM Reporting.** The Permittee shall report as follows:
 - 12.1. Notify the Department of any Method 9 observation results that are greater than the threshold of Condition 10.1 within 30 days of the end of the month in which the observations occurred. Include the dates, EU ID(s), and results when an observed 18-minute average opacity was greater than the threshold in Condition 10.1.
 - 12.2. In each operating report required by Condition 88, include:
 - a. a summary of the results of any source test and visible emissions observations conducted under Condition 10; and
 - b. copies of any visible emissions observation results greater than the threshold in Condition 10.1, if they were not already submitted.
 - 12.3. Report in accordance with Condition 87 any time the results of a source test exceed the PM emission standard in Condition 6.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)] [40 C.F.R. 71.6(a)(3)(iii)]

Sulfur Compound Emission Standards Requirements

13. Sulfur Compound Emissions. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from EU IDs 1, 4, 5, 11,12a, 13 through 16, 18a, 18b, 19a, 22, 52, and 53 listed in Table A, and EU IDs 23 through 25, and 30 through 39 listed in Table B, to exceed 500 ppm averaged over three hours.

[18 AAC 50.040(j)(4), 50.055(c), 50.326(j) & 50.346(c)] [40 C.F.R. 71.6(a)(1)]

Sulfur Compound MR&R

*For Fuel Oil*⁷ (*EU IDs 11, 12a, 13 through 15, 20, and 53*)

- 14. Sulfur Compound Monitoring and Recordkeeping. The Permittee shall monitor and keep records, as follows:
 - 14.1. Comply with either Condition 14.1.a or Condition 14.1.b:

⁷ Oil means crude oil or petroleum or a liquid fuel derived from crude oil or petroleum, including distillate and residual oil, as defined in 40 C.F.R. 60.41b, effective 7/1/07.

- a. For each shipment of fuel::
 - (i) If the fuel grade requires a sulfur content less than 0.5 wt%S_{fuel}, keep receipts that specify fuel grade and amount; or
 - (ii) If the fuel grade does not require a sulfur content less than 0.5 wt%S_{fuel}, keep receipts that specify fuel grade and amount and
 - (A) test the fuel for sulfur content; or
 - (B) obtain test results showing the sulfur content of the fuel from the supplier or refinery; the test results must include a statement signed by the supplier or refinery of what fuel they represent; or
- b. Test the sulfur content of the fuel in each storage tank that supplies fuel to EU IDs 11, 12a, 13 through 15, 20, and 53 at least monthly.
- 14.2. Fuel testing under Condition 14.1.a or Condition 14.1.b must follow an appropriate method listed in 18 AAC 50.035(b)-(c) or 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1).
- 14.3. If a shipment of fuel contains greater than 0.75 wt%S_{fuel} or if the results of a fuel sulfur content test indicate that the fuel contains greater than 0.75 wt%S_{fuel}, the Permittee shall calculate SO₂ emissions in parts per million (ppm) using either the SO₂ material balance calculation in Section 12 or Method 19 of 40 C.F.R. 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a)(3).

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)] [40 C.F.R. 71.6(a)(3)(i) & (ii)]

- 15. Sulfur Compound Reporting. The Permittee shall report as follows:
 - 15.1. If SO₂ emissions calculated under Condition 14.3 exceed 500 ppm, the Permittee shall report under Condition 87. When reporting under this condition, include the calculation under Condition 14.3.
 - 15.2. The Permittee shall include in the operating report required by Condition 88 for each month covered by the report:
 - a. a list of the fuel grades received at the stationary source during the reporting period;
 - b. for any fuel received with a fuel sulfur content greater than 0.5 wt%S_{fuel}, the fuel sulfur content of the shipment;
 - c. the results of all fuel sulfur analyses conducted under Condition 14.1.a or Condition 14.1.b and documentation of the method(s) used to complete the analyses; and
 - d. for any fuel received with a sulfur content greater than $0.75 \text{ wt}\%S_{\text{fuel}}$, the calculated SO₂ emissions in ppm calculated under Condition 14.3.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]

[40 C.F.R. 71.6(a)(3)]

16. For the POGO heaters, EU IDs 24, 25, 30 through 39, to ensure compliance with Condition 13, comply with the fuel sulfur content limit and associated MR&R requirements in Condition 25.

[18 AAC 50.040(j)(4) & 50.326(j)(4)] [40 C.F.R. 71.6(a)(3) & (c)(6)]

For Fuel Gas

- **17.** For EU IDs 1, 4, 5, 16, 18a, 18b, 19a, 22, 23, and 52, to ensure compliance with Condition 13, the Permittee shall comply as follows:
 - 17.1. For EU IDs 1, 4, 5, 16, 18a, 18b, 19a, and 23, comply with the fuel gas hydrogen sulfide content limit and associated MR&R requirements in Condition 26;
 - 17.2. For EU ID 22, comply with the fuel gas hydrogen sulfide content limit and associated MR&R requirements in Condition 20; and
 - 17.3. For EU ID 52, comply with the fuel gas hydrogen sulfide content limit and associated MR&R requirements in Condition 18.

[18 AAC 50.040(j)(4) & 50.326(j)(4)] [40 C.F.R. 71.6(a)(3) & (c)(6)]

Pre-construction Permit⁸ Requirements

Owner Requested Limits (ORLs) to Avoid a Minor Permit Under 18 AAC 50.502(c)(3)

18. SO₂ **Limit, EU ID 52.** For EU ID 52 listed in Table A, the Permittee shall limit SO₂ emissions to no more than 9.4 TPY by limiting fuel gas hydrogen sulfide (H₂S) content to no more than 1,100 ppmv.

[Condition 8, Minor Permit AQ0068MSS04, 6/10/2015] [18 AAC 50.040(j)(4) & 50.326(j)(4)] [40 C.F.R. 71.6(a)(1) & (c)(6)]

- 18.1. The Permittee shall monitor and record the H₂S concentration in the fuel gas no less than monthly using the length-of-stain detector tube protocol covered by ASTM Method D 4810-88 and D 4913-89 or Gas Producer's Association Method 2377-86.
 - a. If the measured H₂S concentration is greater than 85% of the maximum allowable concentration (935 ppmv), the Permittee shall monitor the fuel gas H₂S concentration weekly.
 - b. If the average of four consecutive weekly fuel gas H₂S concentrations is less than 935 ppmv, the Permittee may return to monthly monitoring.
- 18.2. The Permittee shall include copies of the records required in Condition 18.1 in the operating report required by Condition 88.

⁸ *Pre-construction Permit* refers to federal PSD permits, state-issued permits-to-operate issued before January 18, 1997 (these permits cover both construction and operations), construction permits issued after January 17, 1997, and minor permits issued after October 1, 2004.

18.3. The Permittee shall report in accordance with Condition 87 if the H₂S content of any fuel gas burned in EU ID 52 exceeds the limit in Condition 18.

[Conditions 8.1 – 8.3, Minor Permit AQ0068MSS04, 6/10/2015] [18 AAC 50.040(j)(4) & 50.326(j)(4)] [40 C.F.R. 71.6(a)(3)(i) – (iii) & (c)(6)]

Owner Requested Limits to Avoid Classification as a PSD Major Modification and Avoid a Minor Permit Under 18 AAC 50.502(c)(3)

19. NO_x Limit, EU ID 22. For EU ID 22 listed in Table A, the Permittee shall limit NO_x emissions to no more than 39.9 tons per rolling 12 consecutive month period.

```
[Condition 9, Minor Permit AQ0068MSS03, 4/7/2015]
[18 AAC 50.040(j)(4) & 50.326(j)(4)]
[40 C.F.R. 71.6(a)(1) & (c)(6)]
```

- 19.1. Install and operate a data acquisition system capable of logging the following parameters for EU ID 22 at intervals of no greater than once every three minutes:
 - a. Status of SoLoNOx mode (active or inactive), and
 - b. The inlet air temperature of EU ID 22 in degrees Fahrenheit (°F).
- 19.2. At least once every three minutes, the Permittee shall monitor and record the parameters listed in Condition 19.1.
- 19.3. For EU ID 22, the Permittee shall comply with the following no later than the 15th day of each calendar month:
 - a. Calculate and record the NO_x emissions for the previous calendar month. Emissions shall be calculated as follows:
 - (i) Calculate and record the total time, in minutes, that EU ID 22 operated in each of the operating scenarios listed in Conditions 19.3.a(i)(A) through (C) using the data recorded under Condition 19.2.
 - (A) In SoLoNOx at inlet air temperatures $> 0^{\circ}$ F;
 - (B) In SoLoNOx at inlet air temperatures $\leq 0^{\circ}$ F; and
 - (C) Out of SoLoNOx.

[Conditions 9.3a(i)(A) through (B), Minor Permit AQ0068MSS03, 4/7/2015]

(ii) Calculate the emissions for each operating scenario in Condition 19.3.a(i) using Equation 1.

[Condition 9.3a(ii), Minor Permit AQ0068MSS03, 4/7/2015]

Equation 1

1
$$E = n \times \frac{1 hr}{60 \min} \times EF \times \frac{1 ton}{2,000 lb}$$

Where:

E = Emissions (tons per month)

- n = Number of minutes EU ID 22 operated during the month in the specific operating scenario under Condition 19.3.a(i)
- EF = Emission factor from Table D
- (iii) Sum the emissions calculated under Condition 19.3.a(ii).
- b. Calculate and record the rolling 12 consecutive month NO_x emissions.
 Emissions shall be calculated by summing the monthly emissions in Condition 19.3.a with the emissions of the preceding 11 consecutive month period.
- 19.4. For EU ID 22, the Permittee shall report as follows:
 - a. Include the following in the operating report required under Condition 88 for each month covered by the report:
 - (i) The monthly NO_x emissions and rolling 12 consecutive month NO_x emissions, in tons; and
 - (ii) The total hours of operation in each operating scenario in Conditions 19.3.a(i)(A) through (C).
 - b. Report in accordance with Condition 87, if NO_x emissions exceed the limit in Condition 19.
- 19.5. Data capture and recording under Condition 19.2 and calculations and recording under Condition 19.3 may be electronic. All records shall be in a form suitable and readily available for expeditious inspection and review.

[Conditions 9.1 - 9.5, Minor Permit AQ0068MSS03, 4/7/2015] [18 AAC 50.040(j)(4) & 50.326(j)(4)] [40 C.F.R. 71.6(a)(3)(i) – (iii) & (c)(6)]

Pollutant	SoLoNOx Operation	Temperature	Emission Factor (lb/hr)
	In Sol oNOx	>0°F	8.5
NO _x	III SOLOIVOX	≤0°F	26.8
	Out of SoLoNOx	Any	15.6
	In SoLoNOx	>0°F	6.9
СО		$\leq 0^{\circ}F$	20.6
	Out of SoLoNOx	Any	1,099.0
	In Sol aNOr	$> 0^{\circ}F$	0.4
VOC	III SOLONOX	$\leq 0^{\circ}F$	0.8
	Out of SoLoNOx	Any	12.6

Table D – EU ID 22 Emission Factors

[Table 2, Minor Permit AQ0068MSS03, 4/7/2015]

20. Fuel Gas H₂S Content Limit, EU ID 22. For EU ID 22, the Permittee shall limit fuel gas hydrogen sulfide (H₂S) content to no more than 1,100 ppmv.

[Condition 10, Minor Permit AQ0068MSS03, 4/7/2015] [18 AAC 50.040(j)(4) & 50.326(j)(4)] [40 C.F.R. 71.6(a)(1) & (c)(6)]

- 20.1. The Permittee shall monitor, record, and report in accordance with Conditions 18.1 and 18.2.
- 20.2. The Permittee shall report in accordance with Condition 87 if the H_2S content of any fuel gas burned in EU ID 22 exceeds the limit in Condition 20.

[Conditions 10.1 – 10.3, Minor Permit AQ0068MSS03, 4/7/2015] [40 C.F.R. 71.6(a)(3)(i) - (iii) & (c)(6)]

Owner Requested Limits to Avoid Classification as a PSD Major Modification

21. CO and VOC Limits, EU ID 22. For EU ID 22, the Permittee shall limit:

- a. CO emissions to no more than 99.9 tons per rolling 12 consecutive month period.
- b. VOC emissions to no more than 39.9 tons per rolling 12 consecutive month period.

[Condition 11, Minor Permit AQ0068MSS03, 4/7/2015] [18 AAC 50.040(j)(4) & 50.326(j)(4)] [40 C.F.R. 71.6(a)(1) & (c)(6)]

- 21.1. The Permittee shall monitor, record, and report as follows:
 - a. Monitor and record in accordance with Conditions 19.1 and 19.2.
 - b. For EU ID 22, the Permittee shall comply with the following no later than the 15th day of each calendar month:
 - (i) Calculate and record the CO and VOC emissions for the previous calendar month. For each pollutant, emissions shall be calculated as specified in Conditions 19.3.a(i) through 19.3.a(iii).
 - (ii) Calculate and record the rolling 12 consecutive month CO and VOC emissions. Emissions shall be calculated by summing the monthly emissions for each pollutant in Condition 21.1.b(i) with the emissions from the preceding 11 consecutive month period.
 - c. For EU ID 22, the Permittee shall report as follows:
 - d. Include the following in the operating report required under Condition 88 for each month covered by the report:

[Condition 12.3a, Minor Permit AQ0068MSS03, 4/7/2015]

- (i) The monthly CO and VOC emissions and rolling 12 consecutive month CO and VOC emissions, in tons; and
- (ii) Hours of operation as required by Condition 19.4.a(ii).

- e. Report in accordance with Condition 87, if CO or VOC emissions exceed any of the limits in Condition 21.
- f. Data capture and recording under Condition 21.1.a and calculations and recording under Condition 21.1.b may be electronic. All records shall be in a form suitable and readily available for expeditious inspection and review.

[Condition 12, Minor Permit AQ0068MSS03, 4/7/2015] [18 AAC 50.040(j) & 50.326(j)] [40 C.F.R. 71.6(a)(3)(i) - (iii) & (c)(6)]

22. NO_x Requirements, EU ID 4. The Permittee shall avoid classification as a Prevention of Significant Deterioration major modification for NO_x as follows:

[Condition 11, Construction Permit 0123-AC008, 10/23/2001] [18 AAC 50.040(j) & 50.326(j)] [40 C.F.R. 71.6(a)(1)]

- 22.1. The Permittee shall operate EU ID 4 without SoLoNOx technology for no greater than 504 hours per twelve-month rolling period. The Permittee shall operate EU ID 4 with SoLoNOx technology at all other times the unit is in operation.
- 22.2. Limit the cumulative total NO_x emissions for EU ID 4 to no greater than 50.4 tons per 12-month rolling period, expressed as NO₂.

[Condition 11.1.a & 11.1.b, Construction Permit 0123-AC008, 10/23/2001] [40 C.F.R. 71.6(a)(1)]

- 22.3. The Permittee shall monitor compliance with Conditions 22.1 and 22.2 as follows: [Condition 11.2, Construction Permit 0123-AC008, 10/23/2001] [40 C.F.R. 71.6(a)(3)(i)]
 - a. Monitoring and Recording Requirements:

[Condition 11.2.b, Construction Permit 0123-AC008, 10/23/2001] [40 C.F.R. 71.6(a)(3)(i) & (ii)]

(i) Monitor and record the monthly hours of operation with SoLoNOx pilot flames operating and hours of operation without SoLoNOx pilot flames operating. Also, monitor monthly average load and fuel consumption for use calculating emissions as specified in Conditions 22.3.a(ii) and 22.3.a(iii).

[Condition 11.2.b(i), Construction Permit 0123-AC008, 10/23/2001]

(ii) Calculate and record the monthly and consecutive twelve-month period NO_x emissions using the hours of operation as recorded and the emission factor of 3.06 pounds per hour NO_x during SoLoNOx mode and 5.32 pounds per hour NO_x during non-SoLoNOx mode.

[Condition 11.2.b(ii), Construction Permit 0123-AC008, 10/23/2001] [40 C.F.R. 71.6(a)(3) & (c)(6)]

(iii) For each NO_x test performed under Condition 39.1:

- (A) Calculate the emission rate from EU ID 4 using fuel consumption rates measured during each test and the NO_x test results for each load for NO_x during both SoLoNOx mode and non-SoLoNOx mode.
- (B) Include with the source test report a tabulated emission rate (lb/hr), fuel consumption rate, diluents measurement, and NO_x mode for each load tested.
- (C) If tested rates exceed the emission factors of Condition 22.3.a(ii), calculate emissions under that condition using the tested rates. Begin using the revised emission factors on the first day of the month that the source test results are approved by the Department.
 [40 C.F.R. 71.6(a)(3) & (c)(6)]
- 22.4. The Permittee shall report as follows:

[Condition 11.3, Construction Permit 0123-AC008, 10/23/2001] [40 C.F.R. 71.6(a)(3)(iii)]

a. Attach to the Operating Report required under Condition 88, the cumulative total monthly and 12-month rolling total hours of operation with and without SoLoNOx technology and cumulative total monthly and 12-month rolling NO_x emission rates. Monitor SoLoNOx operating mode by whether the combustor pilot flames are on.

[Condition 11.3.a, Construction Permit 0123-AC008, 10/23/2001]

b. Report in accordance with Condition 87 any time any limit under Condition 22.1 or 22.2 is exceeded.

[40 C.F.R. 71.6(a)(3)(iii) & 71.6(c)(6)]

23. CO Requirements, EU ID 4. The Permittee shall avoid classification as a Prevention of Significant Deterioration major modification for CO as follows:

[Condition 12, Construction Permit 0123-AC008, 10/23/2001] [18 AAC 50.040(j) & 50.326(j)] [40 C.F.R. 71.6(a)(1)]

- 23.1. Limit the cumulative total CO emissions for EU ID 4 to no greater than 59.5 tons per 12-month rolling period.
- 23.2. The Permittee shall operate EU ID 4 without SoLoNOx technology for no greater than 504 hours per twelve-month rolling period. The Permittee shall operate EU ID 4 with SoLoNOx technology at all other times the unit is in operation.

[Conditions 12.a & 12.b, Construction Permit 0123-AC008, 10/23/2001]

23.3. The Permittee shall monitor compliance with Condition 23.1 as follows: [Condition 12.2, Construction Permit 0123-AC008, 10/23/2001]

[40 C.F.R. 71.6(a)(3)(i)]

a. Monitoring and Recording Requirements:

[Condition 12.2.b, Construction Permit 0123-AC008, 10/23/2001] [40 C.F.R. 71.6(a)(3)(i) & (ii)]

 Monitor and record the monthly hours of operation with SoLoNOx pilot flames operating and hours of operation without SoLoNOx pilot flames operating. Also, monitor the monthly load and fuel consumption to calculate emissions as specified in Conditions 23.3.a(ii) and 23.3.a(iii).

[Condition 12.2.b(i), Construction Permit 0123-AC008, 10/23/2001]

 (ii) Calculate and record the monthly and consecutive twelve-month period CO emissions using the hours of operation as recorded and the emission factors of 2.60 pounds per hour CO during SoLoNOx mode and 162.7 pounds per hour during non SoLoNOx mode.

> [Condition 12.2.b(ii), Construction Permit 0123-AC008, 10/23/2001] [40 C.F.R. 71.6(a)(3) & (c)(6)]

- (iii) The Permittee shall conduct a source test for carbon monoxide (CO) on EU ID 4, concurrently with each periodic test for NO_x required under Condition 39.1, to verify the emissions factors of Condition 23.3.a(ii) for CO during both SoLoNOx mode and non-SoLoNOx mode.
- (iv) Within the source test report for each NO_x test performed under Condition 39.1:
 - (A) Tabulate the CO emission rate (lb/hr), and NO_x mode for each load tested.
 - (B) If tested rates exceed the emission factors of Condition 23.3.a(ii), calculate emissions under that condition using the tested rates. Begin using the revised emission factors on the first day of the month that the source test results are approved by the Department. [40 C.F.R. 71.6(a)(3) & (c)(6)]

23.4. The Permittee shall report as follows:

[Condition 12.3, Construction Permit 0123-AC008, 10/23/2001] [40 C.F.R. 71.6(a)(3)(iii)]

a. Report hours of operation in SoLoNOx mode and non-SoLoNOx mode as required in Condition 22.4.a.

[Condition 12.3.a, Construction Permit 0123-AC008, 10/23/2001]

b. Attach to the Operating Report required under Condition 88 of this permit, the cumulative total monthly and 12-month rolling total CO emission rates from EU ID 4.

[Condition 12.3.b, Construction Permit 0123-AC008, 10/23/2001]

c. Report in accordance with Condition 87 any time a limit in Condition 23.1 or 23.2 is exceeded.

[40 C.F.R. 71.6(a)(3)(iii) & 71.6(c)(6)]

- 24. Operational Hour Requirements, EU IDs 14, 18a, 18b, 19a. The Permittee shall limit the operational hours of EU IDs 14, 18a, 18b, and 19a as described in Conditions 24.1 and 24.2. Monitor, record and report in accordance with Conditions 24.3 and 24.4.
 - 24.1. Operate EU ID 14 for not more than 1,000 hours per year for the purpose of performing routine maintenance and to verify its operational capability.

[Condition 24, Minor Permit AQ0068MSS03, 4/7/2015] [18 AAC 50.040(j) & 50.326(j)] [40 C.F.R. 71.6(a)(1)]

24.2. Operate EU IDs 18a, 18b, and 19a for not greater than 13,140 hours per year, cumulative total.

[Condition 25, Minor Permit AQ0068MSS03, 4/7/2015] [18 AAC 50.040(j) & 50.326(j)] [40 C.F.R. 71.6(a)(1)]

24.3. The Permittee shall monitor and record the monthly hours of operation of EU IDs 14, 18a, 18b, and 19a.

[Condition 26, Minor Permit AQ0068MSS03, 4/7/2015] [40 C.F.R. 71.6(a)(3)(i) & (ii)]

24.4. The Permittee shall report as follows:

[Condition 27, Minor Permit AQ0068MSS03, 4/7/2015] [40 C.F.R. 71.6(a)(3)(iii)]

- a. Include in the operating report required in Condition 88 the monthly and rolling 12-consecutive-month hours of operation of each of EU IDs 14, 18a, 18b, and 19a for each month covered by the report.
- b. Report in accordance with Condition 87 any time any limit in Condition 24.1 or Condition 24.2 is exceeded.

[Conditions 27.1 & 27.2, Minor Permit AQ0068MSS03, 4/7/2015]

Ambient Air Quality Protection Requirements

25. Liquid Fuel Sulfur Content Limit, EU IDs 24 through 51 (POGO Equipment). For EU IDs 24 through 51 listed in Table B, the Permittee shall use only fuel with a sulfur content of no more than 0.5 percent by weight.

[Condition 31, Minor Permit AQ0068MSS03, 4/7/2015] [18 AAC 50.040(j) & 50.326(j)] [40 C.F.R. 71.6(a)(1)]

- 25.1. The Permittee shall comply with Conditions 14.1 and 14.2 for each shipment of fuel:
- 25.2. Report as described in Condition 87 if the fuel sulfur content of the fuel used in EU IDs 24 through 51 exceeds 0.5 percent by weight.

[Conditions 31.1 & 31.2, Minor Permit AQ0068MSS03, 4/7/2015] [40 C.F.R. 71.6(a)(3)(i) through (iii)] **26.** Fuel Gas Sulfur Content Limits, Stationary Source-wide. Except as required under Conditions 18 and 20, the Permittee shall not burn fuel gas with a hydrogen sulfide (H₂S) content greater than 2,000 parts per million volume (ppmv), stationary source-wide.

[Conditions 32 and 33, Minor Permit AQ0068MSS03, 4/7/2015] [18 AAC 50.040(j) & 50.326(j)] [40 C.F.R. 71.6(a)(1)]

26.1. The Permittee shall monitor and record the hydrogen sulfide (H₂S) concentration in the fuel gas no less than monthly using the length-of-stain detector tube protocol covered by ASTM Method D 4810-88 and D 4913-89 or Gas Producer's Association Method 2377-86.

[Condition 33.1, Minor Permit AQ0068MSS03, 4/7/2015] [40 C.F.R. 71.6(a)(3)(i) & (ii)]

26.2. The Permittee shall monitor the fuel gas H_2S concentration at the following frequencies:

[Condition 33.2, Minor Permit AQ0068MSS03, 4/7/2015] [40 C.F.R. 71.6(a)(3)(i)]

- a. If the measured concentration is greater than 85% of the maximum allowable H₂S concentration (1,700 ppmv), monitor the fuel gas H₂S concentration weekly.
- b. If the average of four consecutive weekly fuel gas H₂S concentrations is less than 1,700 ppmv, the Permittee may return to monthly monitoring specified by Condition 26.1.

[Conditions 33.2a & 33.2b, Minor Permit AQ0068MSS03, 4/7/2015]

26.3. The Permittee shall report the fuel gas H_2S concentration in the operating report required by Condition 88.

[Condition 33.3, Minor Permit AQ0068MSS03, 4/7/2015] [40 C.F.R. 71.6(a)(3)(iii)]

26.4. The Permittee shall report in accordance with Condition 87 if the limit in Condition 26 is exceeded.

[Condition 32, Minor Permit AQ0068MSS03, 4/7/2015] [40 C.F.R. 71.6(a)(3)(iii) & 71.6(c)(6)]

27. The Permittee shall track and report in the Operating Report required by Condition 88, the use of permanent and temporary non-road engines installed after final issue date of Construction Permit 0123-AC008 that have a size rating greater than 400 Brake Horse Power. Include in the report the engine size, serial number, tag number, and the dates that the engine arrived on the platform, initially started up on-site, finally shut down on-site, and the engine removal from the platform.

[Condition 8, Construction Permit 0123-AC008, 10/23/2001] [18 AAC 50.040(j) & 50.326(j)] [40 C.F.R. 71.6(a)(1)]

Insignificant Emissions Units

- **28.** For emissions units at the stationary source that are insignificant as defined in 18 AAC 50.326(d)-(i) that are not listed in this permit, the following apply:
 - 28.1. **VE Standard.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment, or an incinerator to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.050(a) & 50.055(a)(1)]

28.2. **PM Standard.** The Permittee shall not cause or allow particulate matter emitted from an industrial process or fuel-burning equipment to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.055(b)(1)]

28.3. **Sulfur Standard.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c)]

- 28.4. General MR&R for Insignificant Emissions Units. The Permittee shall comply with the following:
 - a. Submit the certification of compliance of Condition 89 based on reasonable inquiry;
 - b. Comply with the requirements of Condition 70; and
 - c. Report in the operating report required by Condition 88 if an emissions unit has historically been classified as insignificant because of actual emissions less than the thresholds of 18 AAC 50.326(e) and current actual emissions have become greater than any of those thresholds.
 - d. No other monitoring, recordkeeping or reporting is required for insignificant emissions units to demonstrate compliance with the emissions standards under Conditions 28.1, 28.2, and 28.3.

[18 AAC 50.040(j)(3), 50.32(j)(3), & 50.346(b)(4)] [40 C.F.R. 71.6(a)(1) & (3)]

Section 4. Federal Requirements

40 C.F.R. Part 60 New Source Performance Standards (NSPS)

NSPS Subpart A – General Provisions

29. NSPS Subpart A Notification. Unless exempted by a specific subpart, for any affected facility⁹ or existing facility¹⁰ regulated under NSPS requirements in 40 C.F.R. 60, the Permittee shall furnish the Administrator¹¹ written notification or, if acceptable to both the EPA and the Permittee, electronic notification, as follows:

[18 AAC 50.035 & 50.040(a)(1)] [40 C.F.R. 60.7(a) & 60.15(d), Subpart A]

29.1. a notification of the date construction (or reconstruction as defined under 40 C.F.R. 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form;

[40 C.F.R. 60.7(a)(1), Subpart A]

29.2. a notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date;

[40 C.F.R. 60.7(a)(3), Subpart A]

- 29.3. a notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 C.F.R. 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include:
 - a. information describing the precise nature of the change,
 - b. present and proposed emission control systems,
 - c. productive capacity of the facility before and after the change, and
 - d. the expected completion date of the change; and

[40 C.F.R. 60.7(a)(4), Subpart A]

29.4. a notification of any proposed replacement of components of an existing facility, for which the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, postmarked as soon as practicable, but no less than 60 days before commencement of replacement, and including the following information:

⁹ Affected facility means, with reference to a stationary source, any apparatus to which a standard applies, as defined in 40 C.F.R. 60.2.

¹⁰ *Existing facility* means, with reference to a stationary source, any apparatus of the type for which a New Source Performance Standard is promulgated, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type, as defined in 40 C.F.R. 60.2.

¹¹ The Department defines the "the Administrator" to mean "the EPA and the Department" for conditions implementing the federal emission standards.

[40 C.F.R. 60.15(d), Subpart A]

- a. the name and address of owner or operator,
- b. the location of the existing facility,
- c. a brief description of the existing facility and the components that are to be replaced,
- d. a description of the existing and proposed air pollution control equipment,
- e. an estimate of the fixed capital cost of the replacements, and of constructing a comparable entirely new facility,
- f. the estimated life of the existing facility after the replacements, and
- g. a discussion of any economic or technical limitations the facility may have in complying with the applicable performance standards after the proposed replacements.
- **30.** NSPS Subpart A Startup, Shutdown, & Malfunction Requirements. The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EU IDs 1, 4, and 22, any malfunctions of the associated air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EU IDs 1, 4, and 22 is inoperative.

[18 AAC 50.040(a)(1)] [40 C.F.R. 60.7(b), Subpart A]

31. NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report. The Permittee shall submit an excess emissions and monitoring systems performance (EEMSP)¹² report and/or summary report form (see Condition 32) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:

[18 AAC 50.040(a)(1)] [40 C.F.R. 60.7(c), Subpart A]

31.1. The date and time of commencement and completion of each time period of excess emissions, and the process operating time during the reporting period.

[40 C.F.R. 60.7(c)(1), Subpart A]

31.2. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of EU IDs 1, 4, and 22; the nature and cause of any malfunction (if known), and the corrective action taken or preventative measures adopted.

[40 C.F.R. 60.7(c)(2), Subpart A]

¹² The federal EEMSP report is not the same as the state excess emission report required by Condition 87. Excess emissions are defined in applicable subparts.

31.3. The date and time identifying each period during which a Continuous Monitoring System (CMS) was inoperative except for zero and span checks and the nature of any repairs or adjustments.

[40 C.F.R. 60.7(c)(3), Subpart A]

31.4. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

[40 C.F.R. 60.7(c)(4), Subpart A]

32. NSPS Subpart A Summary Report Form. The Permittee shall submit to the Department and to EPA one "summary report form" in the format shown in Figure 1 of 40 C.F.R. 60.7 (see Attachment A to the Statement of Basis) for each pollutant monitored for EU IDs 1, 4, and 22. The report shall be submitted semiannually, postmarked by the 30th day following the end of each 6-month period, except when more frequent reporting is specifically required by an applicable subpart or the EPA, as follows:

[18 AAC 50.040(a)(1)] [40 C.F.R. 60.7(c) & (d), Subpart A]

32.1. If the total duration of excess emissions for the reporting period is less than one percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than five percent of the total operating time for the reporting period, submit a summary report form unless the EEMSP report described in Condition 31 is requested, or

[40 C.F.R. 60.7(d)(1), Subpart A]

32.2. If the total duration of excess emissions for the reporting period is one percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is five percent or greater of the total operating time for the reporting period, then submit a summary report form and the EEMSP report described in Condition 31.

[40 C.F.R. 60.7(d)(2), Subpart A]

33. NSPS Subpart A Performance (Source) Tests. The Permittee shall conduct source tests according to 40 C.F.R. 60.8 and Section 6 on any affected facility at such times as may be required by the Administrator, and shall provide the Department and EPA with a written report of the results of the source test.

[18 AAC 50.040(a)(1)] [40 C.F.R. 60.8(a), Subpart A]

34. NSPS Subpart A Good Air Pollution Control Practice (GAPCP). At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU IDs 1, 4, and 22, including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EU IDs 1, 4, and 22.

[18 AAC 50.040(a)(1)] [40 C.F.R. 60.11(d), Subpart A]

35. NSPS Subpart A Credible Evidence. For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 37.1 and 40, nothing in 40 C.F.R. Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 1, 4, and 22 would have been in compliance with applicable requirements of 40 C.F.R. Part 60 if the appropriate performance or compliance test or procedure had been performed.

[18 AAC 50.040(a)(1)] [40 C.F.R. 60.11(g), Subpart A]

36. NSPS Subpart A Concealment of Emissions. The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Conditions 38, 40, and 45. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[18 AAC 50.040(a)(1)] [40 C.F.R. 60.12, Subpart A]

NSPS Subpart GG¹³ – Turbines, EU IDs 1, 4, and 22

37. NSPS Subpart GG Applicability. For EU IDs 4 and 22 listed in Table A, the Permittee shall comply with the applicable requirements for stationary gas turbines, which commenced construction, modification, or reconstruction after October 3, 1977, with a heat input at peak load equal to or greater than 10.7 gigajoules (10 million Btu) per hour based on the lower heating value of the fuel fired.

[18 AAC 50.040(a)(2)(V) & (j)(4) and 50.326(j)] [40 C.F.R. 71.6(a)(1)] [40 C.F.R. 60.330(a) & (b), Subpart GG]

- 37.1. *Emergency Fuel*¹⁴ *Exemption.* Stationary gas turbines when fired with natural gas are exempt from NSPS Subpart GG NO_x standards under 40 C.F.R. 60.332(a)(2), set out under Condition 38, when being fired with an emergency fuel. The Permittee shall
 - a. include in the report required in Condition 31 each period during which an exemption is in effect; and
 - b. report for each period, the type, reasons, and duration of the firing of the emergency fuel.

[40 C.F.R. 60.332(k), and 60.334(j)(4), Subpart GG]

¹³ The provisions of NSPS Subpart GG listed in Conditions 37 through 41 are current as amended through Feb. 27, 2014. Should EPA promulgate revisions to this subpart, the Permittee shall be subject to the revised final provisions as promulgated and not the superseded provisions summarized in these conditions.

¹⁴ *Emergency fuel* is a fuel fired by a gas turbine only during circumstances, such as natural gas supply curtailment or breakdown of delivery system, that make it impossible to fire natural gas in the gas turbine.

38. NSPS Subpart GG NO_x Standard. The Permittee shall not allow the exhaust gas concentration of NO_x, on a dry exhaust basis at 15 percent oxygen (O₂) and ISO standard day conditions,¹⁵ from EU IDs 4 and 22 listed in Table A to exceed the following limits:

38.1. For EU ID 4, 160 ppmv; and

38.2. For EU ID 22, 178 ppmv.

[18 AAC 50.040(a)(2)(V), (j)(4) and 50.326(j)] [40 C.F.R. 71.6(a)(1)] [40 C.F.R. 60.332(a)(2) & (d), Subpart GG]

- **39.** NSPS Subpart GG NO_x MR&R Requirements. The Permittee shall monitor, record, and report compliance with the respective Subpart GG NO_x standard under Condition 38, as follows:
 - 39.1. **Monitoring.** The Permittee shall comply with the following:

[18 AAC 50.040(j) & 50.326(j)(4)] [40 C.F.R. 71.6(a)(3)(i) & (c)(6)]

- a. **Periodic Testing.** For each turbine subject to Condition 38 that operates for 400 hours or more in any 12-month period during the life of this permit, the Permittee shall satisfy either Condition 39.1.a(i) or 39.1.a(ii).
 - (i) For existing turbines whose latest emissions source testing was certified as operating at less than or equal to 90 percent of the most stringent NO_x limit shown in Condition 38, the Permittee shall conduct a NO_x and O_2 source test under 40 C.F.R. 60, Appendix A, Method 20, or Method 7E and either Method 3 or 3A, within the first applicable criteria below:
 - (A) Within 5 years of the latest performance test, or
 - (B) Within 1 year of the effective date of this permit if the last source test occurred greater than five years prior to effective date of this permit and the 400-hour threshold was triggered within 6 months of the permit's effective date, or
 - (C) Within 1 year after exceeding 400 hours of operation in a 12month period if the last source test occurred greater than 4 years prior to the exceedance.
 - (ii) For existing turbines whose latest emissions source testing was certified as operating at greater than 90 percent of the most stringent NO_x limit shown in Condition 38, the Permittee shall conduct a NO_x and O_2 source test under 40 C.F.R. 60, Appendix A, Method 20, or Method 7E and either Method 3 or 3A, annually until two consecutive tests show performance results certified at less than or equal to 90 percent of the NO_x limit shown in Condition 38.

¹⁵ *ISO (International Organization for Standardization) standard day conditions* means 288 degrees Kelvin (59 degrees F), 60 percent relative humidity and 101.3 kilopascals (14.7 psi) pressure. [ref. 40 C.F.R. 60.331(g)]

- b. **Substituting Test Data.** The Permittee may use results of a source test completed under Condition 39.1.a performed on only one of a group of turbines to satisfy the requirements of the condition for the other turbines in the group if
 - (i) the Permittee demonstrates that test results are less than or equal to 90 percent of the most stringent NO_x limit shown in Condition 38, and are projected under Condition 39.1.c to be less than or equal to 90 percent of the limit at maximum load;
 - (ii) for any source test conducted after the effective date of this permit, the Permittee identifies in a source test plan under Condition 79
 - (A) the turbine to be tested;
 - (B) the other turbines in the group that are to be represented by the test; and
 - (C) why the turbine to be tested is representative, including that each turbine in the group
 - (1) is located at a stationary source operated and maintained by the Permittee;
 - (2) is tested under close to identical ambient conditions;
 - (3) is the same make and model and has identical injectors and combustor; and
 - (4) uses the same fuel type from the same supply origin.
 - (iii) The Permittee may not use substitute test results to represent emissions from a turbine or group of turbines if that turbine or group of turbines is operating at greater than 90 percent of the most stringent NO_x limit shown in Condition 38.
- c. Load. The Permittee shall comply with the following:
 - (i) Conduct all tests under Condition 39.1 in accordance with 40 C.F.R. 60.335, except as otherwise approved in writing by the Department or by EPA if the circumstances of the Department or EPA approval are still valid at the time. For the highest load condition, if it is not possible to operate the turbine during the test at maximum load, the Permittee will test the turbine when operating at the highest load achievable by the turbine under the ambient and stationary source operating conditions in effect at the time of the test.
 - (ii) Demonstrate in the source test plan whether the test is scheduled when maximum NO_x emissions are expected.

- (iii) If the highest operating rate tested is less than the maximum load of the tested turbine or another turbine represented by the test data,
 - (A) for each such turbine the Permittee shall provide to the Department as an attachment to the source test report
 - (1) additional test information from the manufacturer or from previous testing of units in the group of turbines; if using previous testing of the group of turbines, the information must include all available test data for the turbines in the group, and
 - (2) a demonstration based on the additional test information that projects the test results from Condition 39.1 to predict the highest load at which emissions will comply with the limit in Condition 38;
 - (B) the Permittee shall not operate any turbine represented by the test data at loads for which the Permittee's demonstration predicts that emissions will exceed the limit in Condition 38;
 - (C) the Permittee shall comply with a written finding prepared by the Department that
 - the information is inadequate for the Department to reasonably conclude that compliance is assured at any load greater than the test load, and that the Permittee must not exceed the test load,
 - (2) the highest load at which the information is adequate for the Department to reasonably conclude that compliance assured is less than maximum load, and the Permittee must not exceed the highest load at which compliance is predicted, or
 - (3) the Permittee must retest during a period of greater expected demand on the turbine, and
 - (D) the Permittee may revise a load limit by submitting results of a more recent Method 20, or Method 7E and either Method 3 or 3A, test done at a higher load, and, if necessary, the accompanying information and demonstration described in Condition 39.1.c(iii)(A); the new limit is subject to any new Department finding under Condition 39.1.c(iii)(C); and
- (iv) In order to perform a source test required under Condition 39.1, the Permittee may operate a turbine at a higher load than that prescribed by Condition 39.1.c(iii).
- (v) For the purposes of Conditions 39.1 through 39.3, maximum load means the hourly average load that is the smallest of
- (A) 100 percent of manufacturer's design capacity of the gas turbine at ISO standard day conditions;
- (B) the highest load allowed by an enforceable condition that applies to the turbine; or
- (C) the highest load possible considering permanent physical restraints on the turbine or the equipment which it powers.
- 39.2. **Recordkeeping.** The Permittee shall keep records as follows:

[18 AAC 50.040(j) & 50.326(j)(4)] [40 C.F.R. 71.6(a)(3)(ii) & (c)(6)]

- a. The Permittee shall comply with the following for each turbine for which a demonstration under Condition 39.1.c(iii) does not show compliance with the NO_x limit in Condition 38 at maximum load.
 - (i) The Permittee shall keep records of
 - (A) load; or
 - (B) as approved by the Department, surrogate measurements for load and the method for calculating load from those measurements.
 - (ii) Records in Condition 39.2.a shall be hourly or otherwise as approved by the Department.
 - (iii) Within one month after submitting a demonstration under Condition 39.1.c(iii)(A)(2) that predicts that the highest load at which emissions will comply is less than maximum load, or within one month of a Department finding under Condition 39.1.c(iii)(C), whichever is earlier, the Permittee shall propose to the Department how load or load surrogates will be measured, and shall propose and comply with a schedule for installing any necessary equipment and beginning monitoring. The Permittee shall comply with any subsequent Department direction on the load monitoring methods, equipment, or schedule.
- b. For any turbine subject to Condition 38, that will operate less than 400 hours in any 12 consecutive months, the Permittee shall keep monthly records of the hours of operation.
- 39.3. **Reporting.** The Permittee shall report as follows:

[18 AAC 50.040(j) & 50.326(j)(4)] [40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]

- a. In each operating report under Condition 88 the Permittee shall list for each turbine tested or represented by testing at less than maximum load and for which the Permittee must limit load under Condition 39.1.c(iii)
 - (i) the load limit;

- (ii) the turbine identification; and
- (iii) the highest load recorded under Condition 39.2.a during the period covered by the operating report.
- b. In each operating report under Condition 88 for each turbine for which Condition 39.1 has not been satisfied because the turbine normally operates less than 400 hours in any 12 consecutive months, the Permittee shall identify
 - (i) the turbine;
 - (ii) the highest number of operating hours for any 12 consecutive months ending during the period covered by the report; and
 - (iii) any turbine that operated for 400 or more hours.
- c. The Permittee shall report under Condition 87 if
 - (i) a test result exceeds the emission standard;
 - (ii) Method 20, or Method 7E and either Method 3 or 3A, testing is required under Condition 39.1.a(i) or 39.1.a(ii) but not performed, or
 - (iii) the turbine was operated at a load exceeding that allowed by Conditions 39.1.c(iii)(B) and 39.1.c(iii)(C); exceeding a load limit is deemed a single violation rather than a multiple violation of both monitoring and the underlying emission limit.

[18 AAC 50.220(a) - (c) & 50.040(a)(1)] [40 C.F.R. 60.8(b), Subpart A]

40. NSPS Subpart GG SO₂ Standard. For EU IDs 1, 4 and 22 listed in Table A, the Permittee shall not burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 wt%S_{fuel} (8000 ppmw).

[18 AAC 50.040(a)(2)(V), (j)(4) & 50.326(j)] [40 C.F.R. 71.6(a)(1)] [40 C.F.R. 60.333(b), Subpart GG]

- **41.** NSPS Subpart GG SO₂ MR&R Requirements. The Permittee shall monitor, record, and report compliance with the applicable Subpart GG SO₂ standard in Condition 40, as follows:
 - 41.1. **Monitoring.** The Permittee shall monitor compliance with the Subpart GG SO₂ standard in Condition 40, as follows:

[18 AAC 50.040(a)(2)(V), (j)(4) & 50.326(j)] [40 C.F.R. 71.6(a)(3)(i)] Monitor the total sulfur content of the fuel being fired in the turbine, except as provided in Condition 41.1.b. Determine the sulfur content of the fuel using total sulfur methods described in Condition 41.2. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), the Permittee may use ASTM D4084-82, 94, D5504-01, D6228-98, or Gas Processors Association Standard 2377-86 (all of which are incorporated by reference-see 40 C.F.R. 60.17), which measure the major sulfur compounds.

[40 C.F.R. 60.334(h)(1), Subpart GG]

b. The Permittee may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in 40 C.F.R. 60.331(u),¹⁶ regardless of whether an existing custom schedule approved by the Administrator requires such monitoring. The Permittee shall use the following source of information to make the required demonstration: ¹⁷

[40 C.F.R. 60.334(h)(3), Subpart GG]

- (i) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or [40 C.F.R. 60.334(h)(3)(i), Subpart GG]
- (ii) Representative fuel sampling data, which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in 40 C.F.R. 75, Appendix D, Section 2.3.1.4 or 2.3.2.4 is required.

[40 C.F.R. 60.334(h)(3)(ii), Subpart GG]

c. For any turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and for which a custom fuel monitoring schedule has previously been approved, the owner or operator may, without submitting a special petition to the Administrator, continue monitoring on this schedule.

[40 C.F.R. 60.334(h)(4), Subpart GG] [EPA Custom Fuel Monitoring Schedule, 4/17/2007]

¹⁶ As defined in 40 C.F.R. 60.331(u), "*Natural gas* means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Equivalents of this in other units are as follows: 0.068 weight percent total sulfur, 680 parts per million by weight (ppmw) total sulfur, and 338 parts per million by volume (ppmv) at 20 degrees Celsius total sulfur. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 British thermal units (Btu) per standard cubic foot. Natural gas, one not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

¹⁷ Periodic fuel sulfur monitoring under Condition 41.1.a and reporting under Conditions 41.4.a do not apply to Subpart GG turbines that have demonstrated that natural gas fuel meets the definition of 40 C.F.R. 60.331(u) as set out by Condition 41.1.b.

d. The frequency of determining the sulfur content of the fuel is as follows:

[40 C.F.R. 60.334(i), Subpart GG]

(i) *Gaseous fuel.* For owners and operators that elect not to demonstrate sulfur content using options in Condition 41.1.b, and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day.

[40 C.F.R. 60.334(i)(2), Subpart GG]

(ii) *Custom schedules.* Notwithstanding the requirements of Condition 41.1.d(i), operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in 40 C.F.R. 60.334(i)(3)(i) and (i)(3)(ii), custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in Condition 40. The two custom sulfur monitoring schedules set forth in 40 C.F.R. 60.334(i)(3)(i)(A) through (D) and 60.334(i)(3)(ii) are acceptable without prior Administrative approval. [40 C.F.R. 60.334(i)(3), Subpart GG]

[40 C.F.R. 60.334(i)(3), Subpart GG] [EPA Custom Fuel Monitoring Schedule, 4/17/2007]

41.2. **Test Methods and Procedures.** If the owner or operator is required under Condition 41.1.d to periodically determine the sulfur content of the fuel combusted in the turbine, the owner or operator shall analyze the samples for the total sulfur content of the fuel as follows:

[18 AAC 50.040(a)(2)(V), (j)(4) & 50.326(j)] [40 C.F.R. 71.6(a)(3)(i)] [40 C.F.R. 60.335(b)(10), Subpart GG]

a. For gaseous fuels, use ASTM D1072-80, 90 (Reapproved 1994); D3246-81, 92, 96; D4468-85 (Reapproved 2000); or D6667-01 (all of which are incorporated by reference, see 40 C.F.R. 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the prior approval of the Administrator.

[40 C.F.R. 60.335(b)(10)(ii), Subpart GG]

b. The fuel analyses may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

[40 C.F.R. 60.335(b)(11), Subpart GG]

41.3. **Recordkeeping.** The Permittee shall keep records as required by Conditions 41.1 and 41.2, and in accordance with Condition 83.

[18 AAC 50.040(j) & 50.326(j)] [40 C.F.R. 71.6(a)(3)(ii) & 71.6(c)(6)]

41.4. **Reporting.** The Permittee shall report as follows:

[18 AAC 50.040(a)(2)(V), (j)(4) & 50.326(j)] [40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]

a. For each affected unit monitored periodically to determine the fuel sulfur content under Condition 41.1.a, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 C.F.R. 60.7(c) as summarized in Condition 31, except where otherwise approved by a custom fuel monitoring schedule. Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under Condition 31, periods of excess emissions and monitor downtime that shall be reported are defined as follows:

[40 C.F.R. 60.334(j), Subpart GG]

- (i) For samples of gaseous fuel obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.
- (ii) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample.

[40 C.F.R. 60.334(j)(2)(i) & (iii), Subpart GG]

b. If electing to comply with Condition 41.1.b, the Permittee shall include with the operating report under Condition 88 a certified statement indicating that the fuel gas combusted at the stationary source meets the definition of natural gas in 40 C.F.R. 60.331(u), pursuant to 40 C.F.R. 60.334(h)(3).

[40 C.F.R. 60.4208(i), Subpart IIII]

NSPS Subpart IIII¹⁸ – Compression Ignition Internal Combustion Engines (CI ICE), EU IDs 12a, 14, and 53

- **42. NSPS Subpart IIII Applicability and General Compliance Requirements.** For EU ID 12a, 14, and 53 listed in Table A, the Permittee shall comply with the applicable requirements for stationary CI ICE located in remote areas of Alaska¹⁹ whose construction²⁰ commences after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006 (for the non-emergency engines, EU IDs 12a and 53) and after July 1, 2006 (for the fire pump engine, EU ID 14).
 - 42.1. For EU IDs 12a, 14, and 53, the Permittee shall comply with the applicable provisions of 40 C.F.R. 60 Subpart A as specified in Table 8 to Subpart IIII, and applicable provisions of Subpart IIII as specified in Conditions 43 through 47.

[18 AAC 50.040(a)(2)(OO) & (j)(4) & 50.326(j)] [40 C.F.R. 71.6(a)(1)] [40 C.F.R. 60.4200(a)(2), 60.4218 and Table 8, Subpart IIII

43. NSPS Subpart IIII GAPCP. Except as permitted under Condition 46.1, the Permittee shall operate and maintain EU IDs 12a, 14, and 53 and control device according to the manufacturer's written instructions, may change only those emission-related settings that are permitted by the manufacturer, and shall meet the requirements of Condition 45. In addition, the Permittee shall operate and maintain EU IDs 12a, 14, and 53 that achieves the emissions standards as required in Condition 45 over the entire life of the engine.

[40 C.F.R. 60.4206, 60.4209, and 60.4211(a), Subpart IIII]

44. NSPS Subpart IIII Fuel Requirements. For EU IDs 12a, 14, and 53, the Permittee is exempt from the fuel requirements of 40 C.F.R. 60.4207, and may use fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel.

[18 AAC 50.040(a)(2)(OO) & (j); & 50.326(j)] [40 C.F.R. 71.6(a)(1)] [40 C.F.R. 60.4216(d) & (f), Subpart IIII]

- 44.1. The sulfur content of the used lubricating oil must be less than 200 ppm.
- 44.2. The used lubricating oil must meet the on-specification levels and properties for used oil in 40 C.F.R. 279.11.
- **45.** NSPS Subpart IIII Emission Standards. The Permittee shall comply with the following emission standards:

[18 AAC 50.040(a)(2)(OO) & (j)(4) & 50.326(j)] [40 C.F.R. 71.6(a)(1)]

¹⁸ The provisions of NSPS Subpart IIII listed in Conditions 42 through 48 are current as amended through November 13, 2019. Should EPA promulgate revisions to this subpart, the Permittee shall be subject to the revised final provisions as promulgated and not the superseded provisions summarized in these conditions.

¹⁹ Remote areas of Alaska, as defined in 40 C.F.R. 60.4219.

²⁰ For the purposes of NSPS Subpart IIII, the date that construction commences is the date the engine is ordered by the owner or operator as defined in 40 C.F.R. 60.4200(a).

- 45.1. Exhaust emissions from EU IDs 12a and 53 (stationary CI ICE with a displacement of less than 10 liters per cylinder located in remote areas of Alaska) shall not exceed the following applicable exhaust emission standards (Tier 3 emission factors) for new nonroad CI engines in 40 C.F.R. 89.112 for all pollutants, for the same displacement and maximum engine power, as follows:
 - a. 4.0 g/kW-hr (or 3.0 g/Hp-hr) for NMHC + NO_x;
 - b. 3.5 g/kW-hr (or 2.6 g/Hp-hr) for CO; and
 - c. 0.20 g/kW-hr (or 0.15 g/Hp-hr) for PM.

```
[40 C.F.R. 60.4216(c), 60.4205(b) & 60.4202(a)(2), Subpart IIII]
[40 C.F.R. 89.112(a) & Table 1, Subpart B]
```

- 45.2. Unless EU IDs 12a and 53 are exempt per 40 C.F.R. 89.113(c), exhaust opacity from each of EU IDs 12a and 53 must not exceed
 - a. 20 percent during the acceleration mode;
 - b. 15 percent during the lugging mode; and
 - c. 50 percent during the peaks in either the acceleration or lugging modes.

[40 C.F.R. 60.4216(c), 60.4205(b) & 60.4202(a)(2), Subpart IIII] [40 C.F.R. 89.113(a), Subpart B]

- 45.3. Exhaust emission from EU ID 14 (stationary fire pump CI ICE) shall not exceed the following applicable exhaust emission standards:
 - a. 10.5 g/kW-hr (or 7.8 g/Hp-hr) for NMHC + NO_x;
 - b. 3.5 g/kW-hr (or 2.6 g/ Hp-hr) for CO; and
 - c. 0.54 g/kW-hr (or 0.40 g/Hp-hr) for PM.

[40 C.F.R. 60.4205(c) & Table 4, Subpart IIII]

46. NSPS Subpart IIII Monitoring and Recordkeeping. The Permittee shall comply with the following:

[18 AAC 50.040(a)(2)(OO) & (j)(4) & 50.326(j)] [40 C.F.R. 71.6(a)(3)(i) & (ii) & (c)(6)]

- 46.1. If the Permittee does not install, configure, operate, and maintain EU IDs 12a, 14, and 53 and control devices according to the manufacturer's emission-related written instructions as required in Condition 43, or changes emission-related settings in a way that is not permitted by the manufacturer, the Permittee shall demonstrate compliance as follows:
 - a. For EU IDs 12a, 14, and 53:

- Keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.
- (ii) In addition, conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

[40 C.F.R. 60.4209 and 60.4211(g)(2), Subpart IIII]

- b. For EU IDs 12a and 53:
 - (i) Conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

[40 C.F.R. 60.4209 and 60.4211(g)(3), Subpart IIII]

Conduct performance tests and meet the not-to-exceed (NTE) standards in accordance with the applicable requirements indicated in 40 C.F.R. 60.4212(a) and (c).

[40 C.F.R. 60.4204(d), 60.4205(e) and 60.4212(a) & (c), Subpart IIII]

46.2. For EU IDs 12a and 53, demonstrate compliance with the emission standards by purchasing an engine certified to the applicable emission standards in Conditions 45.1 and 45.2. The engines must be installed and configured according to the manufacturer's specifications, except as permitted in Condition 46.1.

[40 C.F.R. 60.4209 and 60.4211(c), Subpart IIII]

46.3. For EU ID 14, demonstrate compliance with the emission standards by keeping records of engine manufacturer data indicating compliance with the applicable emission standards in Condition 45.3.

[40 C.F.R. 60.4209 and 60.4211(b)(3), Subpart IIII]

46.4. For EU IDs 14 and 53, the Permittee shall comply with the following requirements for emergency stationary CI ICE under Subpart IIII:

- a. Operate EU IDs 14 and 53 according to the requirements in Conditions 46.4.a(i) through 46.4.a(iii). In order for the engine to be considered an emergency stationary ICE, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in Conditions 46.4.a(i) through 46.4.a(iii), is prohibited. If the Permittee does not operate the engine according to the requirements in Conditions 46.4.a(i) through 46.4.a(iii), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.
 - (i) There is no time limit on the use of emergency stationary ICE in emergency situations.
 - (ii) The Permittee may operate EU IDs 14 and 53 for the purposes specified in Conditions 46.4.a(ii)(A) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition 46.4.a(iii) counts as part of the 100 hours per calendar year allowed by this Condition 46.4.a(ii).
 - (A) EU IDs 14 and 53 may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.
 - (iii) EU IDs 14 and 53 may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in nonemergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in Condition 46.4.a(ii). The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or nonemergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[40 C.F.R. 60.4209 and 60.4211(f)(1) – (3), Subpart IIII]

46.5. If using fuels mixed with used lubricating oil as specified in Condition 44, comply with the following:

- a. Determine that the used oil to be burned for energy recovery meets the fuel specifications of 40 C.F.R. 279.11 and the sulfur content limit in Condition 44.1 by performing approved analyses or obtaining copies of analyses or other information documenting that the used oil fuel meets the specifications.
- b. Keep records of the following:
 - (i) copies of analyses of the used oil (or other information used to make the compliance determination in Condition 46.5.a) for three years;
 - (ii) the amount of the used lubricating oil to be blended;
 - (iii) the amount of other distillate fuel oil to be mixed with the used lubricating oil; and
 - (iv) the ratio of the lubricating oil to the total fuel blend.

[40 C.F.R. 71.6(c)(6)] [40 C.F.R. 279.72(a) & (b)]

47. NSPS Subpart IIII Reporting. The Permittee shall report as follows:

- 47.1. If using fuels mixed with used lubricating oil, include with the operating report required under Condition 88 a copy of the records required in Condition 46.5.b for the period covered by the report.
- 47.2. Report in accordance with Condition 87 if any of the requirements in Conditions 42 through 46 and 48 was not met.

[18 AAC 50.040 (j)(4) & 50.326(j)] [40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]

48. NSPS Subpart IIII Deadline for Importing or Installing Stationary CI ICE in **Previous Model Years.** The Permittee shall comply with the following:

[18 AAC 50.040(a)(2)(OO) & (j)(4) & 50.326(j)] [40 C.F.R. 71.6(a)(1)] [40 C.F.R. 60.4200(a)(4), 60.4208(a) – (i), & 60.4216(e), Subpart IIII]

48.1. The Permittee shall not install stationary CI ICE units in previous (2007 – 2017) model years after the dates and as specified in 40 C.F.R. 60.4208(a) – (g).

[40 C.F.R. 60.4208(a) - (g), Subpart IIII]

48.2. In addition to the requirements specified in 40 C.F.R. 60.4201, 60.4202, 60.4204, and 60.4205, the Permittee shall not import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements and after the dates specified in 40 C.F.R. 60.4208(a) – (g).

[40 C.F.R. 60.4208(h), Subpart IIII]

48.3. The requirements of Condition 48 do not apply to stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

[40 C.F.R. 60.4208(i), Subpart IIII]

40 C.F.R. Part 63 National Emission Standards for Hazardous Air Pollutants (NESHAP)

NESHAP Subpart A – General Provisions

49. NESHAP Subpart A Applicability. The Permittee shall comply with the applicable requirements of 40 C.F.R. 63 Subpart A in accordance with the provisions for applicability of Subpart A in Table 8 to NESHAP Subpart ZZZZ for EU IDs 11, 13, 15, and 20 listed in Table A.

[18 AAC 50.040(c)(1) & (c)(23), (j)(4) and 50.326(j)] [40 C.F.R. 71.6(a)(1) & (a)(3)] [40 C.F.R. 63.1-63.15, Subpart A] [40 C.F.R. 63.6665 & Table 8, Subpart ZZZZ]

NESHAP Subpart ZZZZ²¹ – Stationary RICE, EU IDs 11, 12a, 13, 14, 15, 20, and 53

- **50. NESHAP Subpart ZZZZ Applicability.** The Permittee shall comply with applicable requirements for existing²² (EU IDs 11, 13, 15, and 20) and new²³ (EU IDs 12a, 14, and 53) stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions.
 - 50.1. For EU IDs 11, 13, 15, and 20, existing stationary RICE units, the Permittee shall at all times comply with Conditions 51 through 54.
 - 50.2. For EU IDs 12a, 14, and 53, new stationary RICE units, the Permittee shall meet the requirements of 40 C.F.R. 63 Subpart ZZZZ by meeting the requirements of 40 C.F.R. 60 Subpart IIII in Conditions 42 through 48. No further requirements apply for such engines under 40 C.F.R. 63.

[18 AAC 50.040(c)(23) & (j)(4) and 50.326(j)] 40 C.F.R. 71.6((a)(1) [40 C.F.R. 63.6585(c), 63.6590(a)(1)(iii), (a)(2)(iii) & (c)(1), and 63.6605(a), Subpart ZZZZ]

51. NESHAP Subpart ZZZZ GAPCP, Operation and Maintenance Requirements. The Permittee shall comply with the following:

[18 AAC 50.040(c)(23) & (j)(4) & 50.326(j)] [40 C.F.R. 71.6(a)(1) & (3)(i)]

²¹ The provisions of NESHAP Subpart ZZZZ listed in Conditions 49 through 53 are current as amended through February 27, 2014. Should EPA promulgate revisions to this subpart, the Permittee shall be subject to the revised final provisions as promulgated and not the superseded provisions summarized in these conditions.

²² In accordance with 40 C.F.R. 63.6590(a)(1)(iii), a stationary RICE located at an area source of HAP emissions is *existing* if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

²³ In accordance with 40 C.F.R. 6590(a)(2)(iii), a stationary RICE located at an area source of HAP emissions is *new* if you commenced construction of the stationary RICE on or after June 12, 2006.

51.1. At all times, operate and maintain EU IDs 11, 13, 15, and 20, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of EU IDs 11, 13, 15, and 20.

[40 C.F.R. 63.6605(b), Subpart ZZZZ]

- 51.2. The Permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to either:
 - a. the manufacturer's emission-related written instructions for operation and maintenance; or
 - b. a maintenance plan developed by the Permittee which must provide, to the extent practicable, for the maintenance and operation of the engine(s) in a manner consistent with good air pollution control practice for minimizing emissions.

[40 C.F.R. 63.6625(e)(4), 63.6640(a), & Table 6 (item 9), Subpart ZZZZ]

51.3. Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

[40 C.F.R. 63.6625(h) and Table 2d item 1, Subpart ZZZZ]

52. NESHAP Subpart ZZZZ Work and Management Practices Standards and Monitoring. For EU IDs 11, 13, 15, and 20, the Permittee shall comply with the following work and management practices and monitoring requirements:

[18 AAC 50.040(c)(23) & (j)(4) and 50.326(j)] [40 C.F.R. 71.6(a)(1) & (3)(i)] [40 C.F.R. 63.6603(a) & (b)(1), 63.6640(a), and 63.6625(i), Subpart ZZZZ] [Table 2d and Table 6, Subpart ZZZZ]

- 52.1. For EU IDs 11, 13, 15, and 20:
 - a. Except during periods of startup, the Permittee shall meet the following requirements:
 - (i) Change oil and filter every 1,000 hours of operation or annually, whichever comes first, except as allowed by Condition 52.4;
 - (ii) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
 - (iii) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

[Table 2d (item 1 & Footnote 1), Subpart ZZZZ]

52.2. During periods of startup, the Permittee shall comply with Condition 51.3.

[Table 2d item 1, Subpart ZZZZ]

52.3. Demonstrate continuous compliance with the requirements in Condition 52.1 by complying with Condition 51.2.

[40 C.F.R. 63.6640(a) & Table 6 (item 9), Subpart ZZZZ]

- 52.4. The Permittee has the option to utilize an oil analysis program in order to extend the specified oil change requirements in Condition 52.1.a(i), as described below:
 - a. The oil analysis must be performed at the same frequency specified for changing the oil in Conditions 52.1.a(i).
 - b. The analysis program must, at a minimum, analyze the following three parameters: Total Base Number (for CI engines), Total Acid Number (for SI engines), viscosity, and percent water content. The condemning limits for these parameters are as follows:
 - (i) Total Base Number is less than 30 percent of the Total Base Number of the oil when new;
 - (ii) viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or
 - (iii) percent water content (by volume) is greater than 0.5.
 - c. If all of the condemning limits in Conditions 52.4.b(i) through 52.4.b(iii) are not exceeded, the Permittee is not required to change the oil.
 - d. If any of the limits in Conditions 52.4.b(i) through 52.4.b(iii) is exceeded, the Permittee must change the oil within 2 business days of receiving the results of the analysis.
 - (i) If the engine is not in operation when the results of the analysis are received, the Permittee must change the oil within 2 business days or before commencing operation, whichever is later.
 - e. The analysis program must be part of the maintenance plan for the engine.

[40 C.F.R. 63.6625(i) and Table 2d (Footnote 1), Subpart ZZZZ]

53. NESHAP Subpart ZZZZ Recordkeeping Requirements. The Permittee shall keep records, as follows:

[18 AAC 50.040(c)(23) & (j)(4) and 50.326(j)] [40 C.F.R. 71.6(a) (3)(ii)]

53.1. If electing to operate and maintain EU IDs 11, 13, 15, and 20 according to a maintenance plan developed by the Permittee as allowed under Condition 51.2.b, keep records of the maintenance conducted on EU IDs 11, 13, 15, and 20 in order to demonstrate that the stationary RICE and after-treatment control device (if any) are operated and maintained according to the maintenance plan.

[40 C.F.R. 63.6655(e)(3), Subpart ZZZZ]

53.2. If electing to utilize the oil analysis program described in Condition 52.4, keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine.

[40 C.F.R. 63.6625(i), Subpart ZZZZ]

53.3. Keep records in a form suitable and readily available for expeditious review. Keep each record in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 C.F.R. 63.10(b)(1), except that all records may be retained off site.

[40 C.F.R. 63.6660 & Table 8, Subpart ZZZZ] [40 C.F.R. 63.10(b)(1), Subpart A]

54. NESHAP Subpart ZZZZ Reporting Requirements. The Permittee shall report, as follows:

[18 AAC 50.040(c)(23) & (j)(4) and 50.326(j)] [40 C.F.R. 71.6(c)(3)(iii) & (c)(6)]

54.1. Include in the operating report required by Condition 88 a report of all deviations as defined in 40 C.F.R. 63.6675 and of each instance in which an applicable requirement in 40 C.F.R. 63, Subpart A (Table 8 to Subpart ZZZZ) was not met.

[40 C.F.R. 63.6640(e) & 63.6650(f), Subpart ZZZZ]

54.2. Notify the Department in accordance with Condition 87 if any of the requirements in Conditions 49 through 54 were not met.

[18 AAC 50.040(j)(4) and 50.326(j)(4)] [40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]

40 C.F.R. Part 61 NESHAP

Subpart A (General Provisions) and Subpart M (Asbestos)

55. The Permittee shall comply with the applicable requirements set forth in 40 C.F.R. 61.145, 61.150, and 61.152 of Subpart M, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(1) & (b)(2)(F) and 50.326(j)] [40 C.F.R. 61, Subparts A & M, & Appendix A]

40 C.F.R. Part 82 Protection of Stratospheric Ozone

56. Subpart F – Recycling and Emissions Reduction. The Permittee shall comply with the applicable standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F.

[18 AAC 50.040(d) and 50.326(j)] [40 C.F.R. 82, Subpart F]

57. Subpart G – Significant New Alternatives. The Permittee shall comply with the applicable prohibitions set out in 40 C.F.R. 82.174 (Protection of Stratospheric Ozone Subpart G – Significant New Alternatives Policy Program).

[18 AAC 50.040(d) and 50.326(j)]

[40 C.F.R. 82.174(b) - (d), Subpart G]

58. Subpart H – Halons Emissions Reduction. The Permittee shall comply with the applicable prohibitions set out in 40 C.F.R. 82.270 (Protection of Stratospheric Ozone Subpart H – Halon Emission Reduction).

[18 AAC 50.040(d) and 50.326(j)] [40 C.F.R. 82.270(b) - (f), Subpart H]

40 C.F.R. 63 NESHAP Applicability Determinations

- **59.** The Permittee shall determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories (40 C.F.R. 63) in accordance with the procedures described in 40 C.F.R. 63.1(b).
 - 59.1. If an owner or operator of a stationary source who is in the relevant source category determines that the source is not subject to a relevant standard or other requirement established under 40 C.F.R. 63, the owner or operator must keep a record as specified in 40 C.F.R. 63.10(b)(3).
 - 59.2. If a source becomes affected by an applicable subpart of 40 C.F.R. 63, the owner or operator shall comply with such standard by the compliance date established by the Administrator in the applicable subpart, in accordance with 40 C.F.R. 63.6(c).
 - 59.3. After the effective date of any relevant standard promulgated by the Administrator under this part, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator and the Department of the intended construction or reconstruction. The notification must be submitted in accordance with the procedures in 40 C.F.R. 63.9(b).

[18 AAC 50.040(c)(1), 50.040(j), and 50.326(j)] [40 C.F.R. 71.6(a)(3)(ii)] [40 C.F.R. 63.1(b), 63.5(b)(4), 63.6(c)(1), 63.9(b), & 63.10(b)(3), Subpart A]

Section 5. General Conditions

Standard Terms and Conditions

60. Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.

[18 AAC 50.326(j)(3) and 50.345(a) & (e)]

61. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and re-issuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

```
[18 AAC 50.326(j)(3) and 50.345(a) & (f)]
```

- **62.** The permit does not convey any property rights of any sort, nor any exclusive privilege. [18 AAC 50.326(j)(3) and 50.345(a) & (g)]
- **63.** Administration Fees. The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-403.

[18 AAC 50.326(j)(1), 50.400, and 50.403] [AS 37.10.052(b) and AS 46.14.240]

- 64. Assessable Emissions. For each period from July 1 through the following June 30, the Permittee shall pay to the Department an annual emission fee based on the stationary source's assessable emissions, as determined by the Department under 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities 10 tons per year or greater. The quantity for which fees will be assessed is the lesser of the stationary source's
 - 64.1. potential to emit of 1,577 TPY; or
 - 64.2. projected annual rate of emissions, in TPY, based upon actual annual emissions for the most recent calendar year, or another 12-month period approved in writing by the Department, when demonstrated by credible evidence of actual emissions, based upon the most representative information available from one or more of the following methods:
 - a. an enforceable test method described in 18 AAC 50.220;
 - b. material balance calculations;
 - c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
 - d. other methods and calculations approved by the Department, including appropriate vendor-provided emissions factors when sufficient documentation is provided.

[18 AAC 50.040(j)(4), 50.035, 50.326(j)(1) & (3), 50.346(b)(1), 50.410, and 50.420]

65. Assessable Emission Estimates. The Permittee shall comply as follows:

- 65.1. No later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions as determined in Condition 64.2. Submit actual emissions estimates in accordance with the submission instructions on the Department's Standard Permit Conditions web page at http://dec.alaska.gov/air/air-permit/standard-conditions/
- 65.2. The Permittee shall include with the assessable emissions report all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates.
- 65.3. If the stationary source has not commenced construction or operation on or before March 31st, the Permittee may submit to the Department's Anchorage office a waiver letter certified under 18 AAC 50.205 that states the stationary source's actual annual emissions for the previous calendar year are zero TPY and provides estimates for when construction or operation will commence.
- 65.4. If no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit in Condition 64.1.
 [18 AAC 50.040(j)(4), 50.326(j)(1) & (3), 50.346(b)(1), 50.410, and 50.420]
- **66.** Good Air Pollution Control Practice. The Permittee shall do the following for EU IDs 5, 16, 18a, 18b, 19a, 23 through 42, and 52:
 - 66.1. Perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;
 - 66.2. Keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and
 - 66.3. Keep a copy of either the manufacturer's or the operator's maintenance procedures. [18 AAC 50.326(j)(3) and 50.346(b)(5)]
- **67. Dilution.** The Permittee shall not dilute emissions with air to comply with this permit. Monitoring shall consist of an annual certification that the Permittee does not dilute emissions to comply with this permit.

[18 AAC 50.045(a)]

- **68. Reasonable Precautions to Prevent Fugitive Dust.** A person who causes or permits bulk materials to be handled, transported, or stored, or who engages in an industrial activity or construction project shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air.
 - 68.1. The Permittee shall keep records of
 - a. complaints received by the Permittee and complaints received by the Department and conveyed to the Permittee; and
 - b. any additional precautions that are taken
 - (i) to address complaints described in Condition 68.1.a or to address the results of Department inspections that found potential problems; and

- (ii) to prevent future dust problems.
- 68.2. The Permittee shall report according to Conditions 70.3.

[18 AAC 50.045(d), 50. 326(j)(3), and 50.346(c)]

69. Stack Injection. The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a stationary source constructed or modified after November 1, 1982, except as authorized by a construction permit, Title V permit, or air quality control permit issued before October 1, 2004.

[18 AAC 50.055(g)]

70. Air Pollution Prohibited. No person may permit any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.040(j)(4), 50.110, 50.326(j)(3) and 50.346(a)] [40 C.F.R. 71.6(a)(3)]

- 70.1. Monitoring. The Permittee shall monitor as follows:
 - a. As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 70.
 - b. The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if
 - (i) after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 70; or
 - (ii) the Department notifies the Permittee that it has found a violation of Condition 70.
- 70.2. Recordkeeping. The Permittee shall keep records of
 - a. the date, time, and nature of all emissions complaints received;
 - b. the name of the person or persons that complained, if known;
 - c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 70; and
 - d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.
- 70.3. **Reporting.** The Permittee shall report as follows:

- a. With each stationary source operating report under Condition 88, the Permittee shall include a brief summary report which must include the following for the period covered by the report:
 - (i) the number of complaints received;
 - (ii) the number of times the Permittee or the Department found corrective action necessary;
 - (iii) the number of times action was taken on a complaint within 24 hours; and
 - (iv) the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.
- b. The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.
- c. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 87.
- **71. Technology-Based Emission Standard.** If an unavoidable emergency, malfunction (as defined in 18 AAC 50.235(d)), or non-routine repair (as defined in 18 AAC 50.990(64)), causes emissions in excess of a technology-based emission standard²⁴ listed in Conditions 37.1, 40, or 56 (refrigerants), the Permittee shall
 - 71.1. take all reasonable steps to minimize levels of emissions that exceed the standard; and
 - 71.2. report in accordance with Condition 87.1.b; the report must include information on the steps taken to mitigate emissions and corrective measures taken or to be taken.

[18 AAC 50.235(a), 50.326(j)(4), and 50.040(j)(4)] [40 C.F.R. 71.6(c)(6)]

Open Burning Requirements

72. Open Burning. The Permittee shall not conduct open burning at the stationary source.

[18 AAC 50.065, 50.040(j), and 50.326(j)] [40 C.F.R. 71.6(a)(3)]

²⁴ As defined in 18 AAC 50.990(106), the term "*technology-based emission standard*" means a best available control technology (BACT) standard; a lowest achievable emission rate (LAER) standard; a maximum achievable control technology (MACT) standard established under 40 C.F.R. 63, Subpart B, adopted by reference in 18 AAC 50.040(c); a standard adopted by reference in 18 AAC 50.040(a) or (c); and any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

Section 6. General Source Testing and Monitoring Requirements

73. Requested Source Tests. In addition to any source testing explicitly required by the permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a) and 50.345(a) & (k)]

74. Operating Conditions. Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing

[18 AAC 50.220(b)]

- 74.1. at a point or points that characterize the actual discharge into the ambient air; and
- 74.2. at the maximum rated burning or operating capacity of the emissions unit or another rate determined by the Department to characterize the actual discharge into the ambient air.
- **75. Reference Test Methods.** The Permittee shall use the following test methods when conducting source testing for compliance with this permit:
 - 75.1. Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

[18 AAC 50.220(c)(1)(A) and 50.040(a)] [40 C.F.R. 60]

75.2. Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63.

[18 AAC 50.040(c) and 50.220(c)(1)(C)] [40 C.F.R. 63]

75.3. Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Reference Method 9. The Permittee may use the form in Section 11 to record data.

[18 AAC 50.030 and 50.220(c)(1)(D)]

75.4. Source testing for emissions of PM_{2.5} and PM₁₀, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.

[18 AAC 50.040(a)(3) and 50.220(c)(1)(E)] [40 C.F.R. 60, Appendix A]

75.5. Source testing for emissions of PM_{10} and $PM_{2.5}$ must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.

[18 AAC 50.035(b)(2) and 50.220(c)(1)(F)] [40 C.F.R. 51, Appendix M] 75.6. Source testing for emissions of any pollutant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.

[18 AAC 50.040(c)(24) and 50.220(c)(2)] [40 C.F.R. 63, Appendix A, Method 301]

76. Excess Air Requirements. To determine compliance with this permit, standard exhaust gas volumes must include only the volume of gases formed from the theoretical combustion of the fuel, plus the excess air volume normal for the specific emissions unit type, corrected to standard conditions (dry gas at 68 °F and an absolute pressure of 760 millimeters of mercury).

[18 AAC 50.220(c)(3) and 50.990(102)]

77. Test Exemption. The Permittee is not required to comply with Conditions 79, 80 and 81 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 2.2).

[18 AAC 50.345(a)]

78. Test Deadline Extension. The Permittee may request an extension to a source test deadline established by the Department. The Permittee may delay a source test beyond the original deadline only if the extension is approved in writing by the Department's appropriate division director or designee.

[18 AAC 50.345(a) & (l)]

79. Test Plans. Except as provided in Condition 77, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the emissions unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under Condition 73 and at least 30 days before the scheduled date of any test unless the Department agrees in writing to some other time period. Retesting may be performed without resubmitting the plan.

[18 AAC 50.345(a) & (m)]

80. Test Notification. Except as provided in Condition 77, at least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and the time the source test will begin.

[18 AAC 50.345(a) & (n)]

81. Test Reports. Except as provided in Condition 77, within 60 days after completing a source test, the Permittee shall submit one certified copy of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in Condition 84. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.

[18 AAC 50.345(a) & (o)]

82. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in Conditions 6 and 28.2, the three-hour average is determined using the average of three one-hour test runs.

[18 AAC 50.220(f)]

Section 7. General Recordkeeping and Reporting Requirements

Recordkeeping Requirements

- **83.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:
 - 83.1. Copies of all reports and certifications submitted pursuant to this section of the permit; and
 - 83.2. Records of all monitoring required by this permit, and information about the monitoring including:
 - a. the date, place, and time of sampling or measurements;
 - b. the date(s) analyses were performed;
 - c. the company or entity that performed the analyses;
 - d. the analytical techniques or methods used;
 - e. the results of such analyses; and,
 - f. the operating conditions as existing at the time of sampling or measurement.

[18 AAC 50.040(a)(1) & (j)(4) and 50.326(j)] [40 C.F.R 60.7(f), Subpart A, 40 C.F.R 71.6(a)(3)(ii)(A) & (B)]

Reporting Requirements

- **84.** 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.
 - 84.1. The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if the person providing the electronic signature
 - a. uses a security procedure, as defined in AS 09.80.190, that the Department has approved; and
 - b. accepts or agrees to be bound by an electronic record executed or adopted with that signature.

[18 AAC 50.205, 50.326(j), and 50.345(a) & (j), & 50.346(b)(10)]

- **85.** Submittals. Unless otherwise directed by the Department or this permit, the Permittee shall submit to the Department one certified copy of reports, compliance certifications, and/or other submittals required by this permit. The Permittee may submit the documents electronically or by hard copy.
 - 85.1. Submit the certified copy of reports, compliance certifications, and/or other submittals in accordance with the submission instructions on the Department's Standard Permit Conditions web page at <u>http://dec.alaska.gov/air/air-permit/standard-conditions/standard-condition-xvii-submission-instructions/</u>.

[18 AAC 50.326(j)(3) & 50.346(b)(10)]

86. Information Requests. The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by the permit. The Department may require the Permittee to furnish copies of those records directly to the Federal Administrator.

 $\begin{array}{l} [18 \text{ AAC } 50.345(a) \ \& \ (i), \ 50.200, \ and \ 50.326(a) \ \& \ (j)] \\ [40 \ C.F.R. \ 71.5(a)(2) \ and \ 71.6(a)(3)] \end{array}$

- **87.** Excess Emissions and Permit Deviation Reports. The Permittee shall report excess emissions and permit deviations as follows:
 - 87.1. **Excess Emissions Reporting.** Except as provided in Condition 70, the Permittee shall report all emissions or operations that exceed emissions standards or limits of this permit as follows:
 - a. In accordance with 18 AAC 50.240(c), as soon as possible, report
 - (i) excess emissions that present a potential threat to human health or safety; and
 - (ii) excess emissions that the Permittee believes to be unavoidable;
 - b. In accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology-based emission standard.
 - c. If a continuous or recurring excess emissions is not corrected within 48 hours of discovery, report within 72 hours of discovery unless the Department provides written permission to report under Condition 87.1.d.
 - d. Report all other excess emissions not described in Conditions 87.1.a, 87.1.b, and 87.1.c within 30 days after the end of the month during which the excess emissions occurred or as part of the next routine operating report in Condition 88 for excess emissions that occurred during the period covered by the report, whichever is sooner.

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

[18 AAC 50.235(a)(2), 50.240(c), 50.326(j)(3), & 50.346(b)(2)]

- 87.2. **Permit Deviations Reporting.** For permit deviations that are not "excess emissions," as defined under 18 AAC 50.990:
 - a. Report according to the required deadline for failure to monitor, as specified in other applicable conditions of this permit (Conditions 4.3.b and 9.3.b).
 - b. Report all other permit deviations within 30 days after the end of the month during which the deviation occurred or as part of the next routine operating report in Condition 88 for permit deviations that occurred during the period covered by the report, whichever is sooner.
- 87.3. **Notification Form.** When reporting either excess emissions or permit deviations, the Permittee shall report using either the Department's online form, which can be found at the Division of Air Quality's Air Online Services (AOS) system webpage <u>http://dec.alaska.gov/applications/air/airtoolsweb</u> using the Permittee Portal option, or, if the Permittee prefers, the form contained in Section 13 of this permit. The Permittee must provide all information called for by the form that is used. Submit the report in accordance with the submission instructions on the Department's Standard Permit Conditions webpage found at <u>http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-iii-and-iv-submission-instructions/</u>. [18 AAC 50.235(a)(2), 50.240(c), 50.326(j)(3), & 50.346(b)(2) & (3)]
- **88. Operating Reports.** During the life of this permit²⁵, the Permittee shall submit to the Department an operating report in accordance with Conditions 84 and 85 by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.
 - 88.1. The operating report must include all information required to be in operating reports by other conditions of this permit, for the period covered by the report.
 - 88.2. When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 88.1, the Permittee shall identify
 - a. the date of the excess emissions or permit deviation;
 - b. the equipment involved;
 - c. the permit condition affected;
 - d. a description of the excess emissions or permit deviation; and

²⁵ Life of this permit is defined as the permit effective dates, including any periods of reporting obligations that extend beyond the permit effective dates. For example if a permit expires prior to the end of a calendar year, there is still a reporting obligation to provide operating reports for the periods when the permit was in effect.

- e. any corrective action or preventive measures taken and the date(s) of such actions; or
- 88.3. when excess emissions or permit deviations have already been reported under Condition 87 during the period covered by the operating report, the Permittee shall either
 - a. include a copy of those excess emissions or permit deviation reports with the operating report; or
 - b. cite the date(s) of those reports.
- 88.4. The operating report must include, for the period covered by the report, a listing of emissions monitored under Conditions 2.2.e and 39.1.a(ii), which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report:
 - a. the date of the emissions;
 - b. the equipment involved;
 - c. the permit condition affected; and
 - d. the monitoring result which triggered the additional monitoring.
- 88.5. **Transition from expired to renewed permit**. For the first period of this renewed operating permit, also provide the previous permit's operating report elements covering that partial period immediately preceding the effective date of this renewed permit.

[18 AAC 50.346(b)(6) & 50.326(j)] [40 C.F.R. 71.6(a)(3)(iii)(A)]

- **89.** Annual Compliance Certification. Each year by March 31, the Permittee shall compile and submit to the Department an annual compliance certification report according to Condition 85.
 - 89.1. Certify the compliance status of the stationary source over the preceding calendar year consistent with the monitoring required by this permit, as follows:
 - a. identify each term or condition set forth in Section 3 through Section 9, that is the basis of the certification;
 - b. briefly describe each method used to determine the compliance status;
 - c. state whether compliance is intermittent or continuous; and
 - d. identify each deviation and take it into account in the compliance certification.
 - 89.2. **Transition from expired to renewed permit**. For the first period of this renewed operating permit, also provide the previous permit's annual compliance certification report elements covering that partial period immediately preceding the effective date of this renewed permit.

89.3. In addition, submit a copy of the report directly to the Clean Air Act Compliance Manager, US EPA – Region 10, ATTN: Air Toxics and Enforcement Section, Mail Stop: 20-C04, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101-3188.

> [18 AAC 50.205, 50.345(a) & (j), and 50.326(j)] [40 C.F.R. 71.6(c)(5)]

- **90.** Emission Inventory Reporting. The Permittee shall submit to the Department reports of actual emissions for the previous calendar year, by emissions unit, of CO, NH₃, NO_x, PM₁₀, PM_{2.5}, SO₂, VOC and lead (Pb) and lead compounds, as follows:
 - 90.1. **Every-year inventory.** Each year by April 30, if the stationary source's potential to emit for the previous calendar year equals or exceeds:
 - a. $250 \text{ TPY of } NH_3$, PM_{10} , $PM_{2.5}$ or VOC; or
 - b. 2,500 TPY of CO, NO_x or SO₂.
 - 90.2. **Triennial inventory.** Every third year by April 30, if the stationary source's potential to emit (except actual emissions for Pb) for the previous calendar year equals or exceeds:
 - a. For stationary sources located in Attainment and Unclassifiable Areas:
 - (i) 0.5 TPY of actual Pb, or
 - (ii) 1,000 TPY of CO; or
 - (iii) 100 TPY of SO₂, NH₃, PM₁₀, PM_{2.5}, NO_x or VOC.
 - b. For stationary sources located in Nonattainment Areas:
 - (i) 0.5 TPY of actual Pb, or
 - (ii) 1,000 TPY of CO or, when located in a CO nonattainment area, 100 TPY of CO; or
 - (iii) 100 TPY of SO₂, NH₃, PM₁₀, PM_{2.5}, NO_x, or VOC; or as specified in Conditions 90.2.b(iv) through 90.2.b(viii):
 - (iv) 70 TPY of SO₂, NH₃, PM_{2.5}, NO_x, or VOC in PM_{2.5} serious nonattainment; or
 - (v) 70 TPY of PM_{10} in PM_{10} serious nonattainment areas; or
 - (vi) 50 TPY of NO_x or VOC in O_3 serious nonattainment areas; or
 - (vii) 25 TPY of NO_x or VOC in O_3 severe nonattainment areas; or
 - (viii) 10 TPY of NO_x or VOC in O₃ extreme nonattainment areas.

- 90.3. For reporting under Condition 90.2, the Permittee shall report the annual emissions and the required data elements under Condition 90.4 every third year for the previous calendar year as scheduled by the EPA.²⁶.
- 90.4. For each emissions unit and the stationary source, include in the report the required data elements²⁷ contained within the form included in the Emission Inventory Instructions available at the Department's AOS system on the Point Source Emission Inventory webpage at http://dec.alaska.gov/Applications/Air/airtoolsweb/PointSourceEmissionInventory.
- 90.5. Submit the report in accordance with the submission instructions on the Department's Standard Permit Conditions webpage at <u>http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-xv-and-xvi-submission-instructions/</u>.

[18 AAC 50.040(j)(4), 50.200, 50.326(j)(3), & 50.346(b)(8)] [40 C.F.R. 51.15, 51.30(a)(1) & (b)(1), and Appendix A to 40 C.F.R. 51 Subpart A]

91. NSPS and NESHAP Reports. The Permittee shall comply with the following:

- 91.1. **Reports:** Except for previously submitted reports and federal reports and notices submitted through EPA's Central Data Exchange (CDX) and Compliance and Emissions Data Reporting Interface (CEDRI) online reporting system, attach to the operating report required by Condition 88 for the period covered by the report, a copy of any NSPS and NESHAP reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10. For reports previously submitted to ADEC or submitted through CDX/CEDRI, state in the operating report the date and a brief description of each of the reports submitted during the reporting period; and
- 91.2. **Waivers**: Upon request by the Department, provide a written copy of any EPA-granted alternative monitoring requirement, custom monitoring schedule or waiver of the federal emission standards, recordkeeping, monitoring, performance testing, or reporting requirements. The Permittee shall keep a copy of each U.S. EPA-issued monitoring waiver or custom monitoring schedule with the permit.

[18 AAC 50.326(j)(4) and 50.040(j)] [40 C.F.R. 60.13, Subpart A; 63.10(d) & (f), Subpart A; and 40 C.F.R. 71.6(c)(6)]

²⁶ The calendar years for which reports are required are based on the triennial reporting schedule in 40 C.F.R. 51.30(b)(1), which requires states to report emissions data to the EPA for inventory years 2011, 2014, 2017, 2020, and every 3rd year thereafter. Therefore, the Department requires Permittees to report emissions data for the same inventory years by April 30 of the following year (e.g., triennial emission inventory report for 2020 is due April 30, 2021, triennial emission inventory report for 2023 is due April 30, 2024, etc.).

²⁷ The required data elements to be reported to the EPA are outlined in 40 C.F.R. 51.15 and Tables 2a and 2b to Appendix A of 40 C.F.R. 51 Subpart A.

Section 8. Permit Changes and Renewal

- **92. Permit Applications and Submittals.** The Permittee shall comply with the following requirements for submitting application information to the EPA:
 - 92.1. The Permittee shall provide a copy of each application for modification or renewal of this permit, including any compliance plan, or application addenda, at the time the application or addendum is submitted to the Department;
 - 92.2. The information shall be submitted to the Part 70 Operating Permit Program, US EPA Region 10, Air Permits and Toxics Branch, Mail Stop: 15-H13, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101-3188;
 - 92.3. To the extent practicable, the Permittee shall provide to EPA applications in portable document format (PDF); MS Word format (.doc); or other computer-readable format compatible with EPA's national database management system; and
 - 92.4. The Permittee shall maintain records as necessary to demonstrate compliance with this condition.

[18 AAC 50.040(j)(7) and 50.326(b)] [40 C.F.R. 71.10(d)(1)]

93. Emissions Trading. No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit.

[18 AAC 50.040(j)(4) and 50.326(j)] [40 C.F.R. 71.6(a)(8)]

- **94. Off Permit Changes.** The Permittee may make changes that are not addressed or prohibited by this permit other than those subject to the requirements of 40 C.F.R. Part 72 through 78 or those that are modifications under any provision of Title I of the Act to be made without a permit revision, provided that the following requirements are met:
 - 94.1. Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition;
 - 94.2. Provide contemporaneous written notice to EPA and the Department of each such change, except for changes that qualify as insignificant under 18 AAC 50.326(d) (i). Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change;
 - 94.3. The change shall not qualify for the shield under 40 C.F.R. 71.6(f); and
 - 94.4. The Permittee shall keep a record describing changes made at the stationary source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

[18 AAC 50.040(j)(4) and 50.326(j)] [40 C.F.R. 71.6(a)(12)]

- **95. Operational Flexibility.** The Permittee may make Section $502(b)(10)^{28}$ changes within the permitted stationary source without requiring a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions).
 - 95.1. The Permittee shall provide EPA and the Department with a notification no less than 7 days in advance of the proposed change.
 - 95.2. For each such change, the written notification required above shall include a brief description of the change within the permitted stationary source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.
 - 95.3. The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to Condition 95.

[18 AAC 50.040(j)(4) and 50.326(j)] [40 C.F.R. 71.6(a)(13)]

96. Permit Renewal. To renew this permit, the Permittee shall submit to the Department²⁹ an application under 18 AAC 50.326 no sooner than [**18 months before the expiration date of this permit**] and no later than [**6 months before the expiration date of this permit**]. The renewal application shall be complete before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the stationary source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 C.F.R. 71.7(b) and 71.5(a)(1)(iii).

[18 AAC 50.040(j)(3) and 50.326(c)(2) & (j)(2)] [40 C.F.R. 71.5(a)(1)(iii) and 71.7(b) & (c)(1)(ii)]

²⁸ As defined in 40 C.F.R. 71.2, Section 502(b)(10) changes are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

²⁹ Submit permit applications to the Department's Anchorage office. The current address is: Air Permit Intake Clerk, ADEC, 555 Cordova Street, Anchorage, AK 99501.

Section 9. Compliance Requirements

General Compliance Requirements

- **97.** Compliance with permit terms and conditions is considered to be compliance with those requirements that are
 - 97.1. included and specifically identified in the permit; or
 - 97.2. determined in writing in the permit to be inapplicable.

[18 AAC 50.326(j)(3) and 50.345(a) & (b)]

- **98.** The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14.120(c), 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for
 - 98.1. an enforcement action;
 - 98.2. permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or
 - 98.3. denial of an operating permit renewal application.

[18 AAC 50.040(j), 50.326(j), and 50.345(a) & (c)]

99. For applicable requirements with which the stationary source is in compliance, the Permittee shall continue to comply with such requirements.

[18 AAC 50.040(j)(3) & (4) and 50.326(j)] [40 C.F.R. 71.6(c)(3) and 71.5(c)(8)(iii)(A)]

100. For applicable requirements that will become effective during the permit term, the Permittee shall meet such requirements on a timely basis.

 $[18 \text{ AAC } 50.040(j)(3) \& (4) \text{ and } 50.326(j)] \\ [40 \text{ C.F.R. } 71.6(c)(3) \text{ and } 71.5(c)(8)(iii)(B)]$

101. It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

 $[18 \text{ AAC } 50.326(j)(3) \And 50.345(a) \And (d)]$

- **102.** 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
 - 102.1. enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;
 - 102.2. have access to and copy any records required by the permit;
 - 102.3. inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and

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

[18 AAC 50.326(j)(3) and 50.345(a) & (h)]

Section 10. Permit As Shield from Inapplicable Requirements

In accordance with AS 46.14.290, and based on information supplied in the permit application, this section of the permit contains the requirements determined by the Department not to be applicable to the stationary source.

- **103.** Nothing in this permit shall alter or affect the following:
 - 103.1. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section; or
 - 103.2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance.

[18 AAC 50.326(j)] [40 C.F.R. 71.6(f)(3)(i) & (ii)]

104. Table E identifies the emissions units that are not subject to the specified requirements at the time of permit issuance. If any of the requirements listed in Table E becomes applicable during the permit term, the Permittee shall comply with such requirements on a timely basis including, but not limited to, providing appropriate notification to EPA, obtaining a construction permit and/or an operating permit revision.

[18 AAC 50.326(j)] [40 C.F.R. 71.6(f)(1)(ii)]

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
Stationary source-wide	 40 C.F.R. 60, Subparts Cb, Ce, D, Da, Db, Dc, E, Ea, Eb, Ec, AAAA, CCCC, EEEE – Standards of Performance for Solid Waste Incinerators and Municipal Waste Combustors 40 C.F.R. 60, Subparts O and LLLL – Standards of Performance for Sewage Treatment Plants and Sludge Incinerators 	No existing emissions unit is an "affected facility" at the issue date of this permit.
	40 C.F.R. 60, Subparts BBBB, DDDD, FFFF, and MMMM - Emission Guidelines and Compliance Times for Small Municipal Waste Combustion Units, CISWI, and Existing Sewage Sludge Incineration Units	These subparts apply to the Administrator of an air quality program and not to the owner or operator of the affected incineration or combustion units.

Table E - Permit Shields Granted

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	40 C.F.R. 60, Subpart OOOO - Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution that commence construction, modification or reconstruction after August 23, 2011, and on or before September 18, 2015	No existing emissions unit is an "affected facility" at the issue date of this permit.
	40 C.F.R. 60, Subpart KKK and LLL - Standards of Performance for Equipment Leaks of VOC and SO ₂ Emissions From Onshore Natural Gas Processing Plants	The stationary source is an offshore oil and gas production platform.
	40 C.F.R. 63 Subpart HHH – National Emission Standards for Hazardous Air Pollutants (NESHAP) from Natural Gas Transmission and Storage Facilities 40 C.F.R. 63 Subpart YYYY – National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines	This stationary source is not a "major source" of HAPs as defined in 40 C.F.R. 63.1271. This permit shield only applies to the stationary source until it becomes a major source of HAP emissions.
	18 AAC 50.055(b)(3) – PM emissions standard for industrial process in operation before July 1, 1972	No affected industrial process within the permitted stationary source.
Stationary Source-wide	40 C.F.R. 60 Subparts K, Ka, and Kb - Standards of Performance for Storage Vessels for Petroleum Liquids and Volatile Organic Liquid	Stationary source does not own or operate storage vessels storing petroleum liquid and volatile organic liquid that meet applicability criteria under Subparts K, Ka, and Kb at the issue date of this permit.
Nonroad (mobile) internal combustion engines	18 AAC 50.055(a)(1) & (c) – Fuel- Burning Equipment Emission Standards; Visible Emissions and Sulfur Compound emission standards	Nonroad (mobile) internal combustion engines are not included in the definition of fuel-burning equipment (18 AAC 50.990).
1, 4, and 22	40 C.F.R. 60 Subpart GG, §§60.334(a), (b), & (g) §§60.334(d), (e) & (f)	These requirements apply only to turbines using water injection for NO_x control and opts to use CEMS for monitoring. EU IDs 1, 4, and 22 do not use water/steam injection or CEMS.
1, 4, and 22	40 C.F.R. 60 Subpart GG, §60.334(h)(2)	Hilcorp chooses not to claim an allowance for fuel bound nitrogen for EU IDs 1, 4, and 22; therefore, nitrogen content of the fuel does not have to be monitored.
1	40 C.F.R. 60.332(a), Subpart GG	40 C.F.R. 60.332(e) exempts turbines with a heat input less than 100 MMBtu/hr that commenced construction prior to Oct. 3, 1982 from Subpart GG NO_x limits. EU ID 1 meets these criteria.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
1, 4, 5, 22, and 52	40 C.F.R. 60 Subpart KKKK, Standards for Performance for Stationary Combustion Turbines	EU IDs 1, 4, 5, 22, and 52 were not constructed after the applicability date of February 18, 2005 and have not been modified or reconstructed thereafter. The permit shield for Subpart KKKK only applies to these units until modified, reconstructed or replaced. The Permittee is required to notify the Department prior to reconstructing or modifying of these EUs.
1, 4, 5, 22, and 52	40 C.F.R. 63 Subpart YYYY, NESHAP for Stationary Combustion Turbines	King Salmon Platform is not a Major Source of HAP Emissions. This permit shield only applies to the currently installed unit until the source becomes a major source of HAP emissions.
5 and 52	40 C.F.R. 60 Subpart GG, Standards for Performance for Stationary Combustion Turbines	EU IDs 5 and 52 was not constructed after the applicability date of October 3, 1977 and have not been modified or reconstructed thereafter. The permit shield for Subpart GG only applies to these units until modified, reconstructed or replaced. The Permittee is required to notify the Department prior to reconstructing or modifying of these EUs.
11, 13, 15, and 20	40 C.F.R. 60 Subpart IIII	EU IDs 11, 13, 15, and 20 are exempt from the requirements of 40 C.F.R. 60 Subpart IIII because they commenced construction, modification, or reconstruction prior to the applicability date of July 11, 2005. The permit shield for Subpart IIII only applies to currently installed units until modified, reconstructed or replaced.
12a	40 C.F.R. 60 Subpart IIII 60.4201(b) – (e) 60.4204(a), (c), (e) 60.4211(b), (d) – (f), 60.4213 60.4214 60.4215	EU ID 12a is a post 2007 model, non-emergency CI ICE, with a displacement of less than 10 liters per cylinder. It is not a modified nor reconstructed engine and not equipped with a particulate filter nor with an auxiliary emission control device (AECD). The engine is located in an area of Alaska not accessible by the FAHS and is certified to meet the applicable emissions standards.
	60.4208	EU ID 12a does not meet the specifications of the engines covered under the provisions of 40 C.F.R. 60.4208 for importing or installing stationary CI ICE produced in previous model years.
	60.4217	EU ID 12a does not use special fuels.
53	40 C.F.R. 60 Subpart IIII 60.4203 and 60.4210	These requirements apply to engine manufacturers only. Hilcorp is the owner/operator of the engine, not the manufacturer.
	60.4201 and 60.4204	EU ID 53 is an emergency engine. 40 C.F.R. 60.4201 and 60.4204 applies only to non-emergency engines.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	60.4205(a), (c), (d), & (f) 60.4211(b) & (e) 60.4214(a)	These requirements apply to engines that are either: manufactured before 2007, with displacement greater than 10 liters per cylinder or power rating greater than 2,237 KW (3,000 Hp), are reconstructed, or are fire pump engines. EU ID 53 was manufactured after 2007, has a displacement of less than 10 liters per cylinder and power rating of 685 Hp, was not reconstructed, and is not a fire pump engine.
11, 12a, 13, 14, 15, 20, and 53	40 C.F.R. 60 Subpart JJJJ	40 C.F.R. 60 Subpart JJJJ applies only to stationary spark ignition (SI) internal combustion engines (ICE). EU IDs 11, 12a, 13, 14, 15, 20, and 53 are exempt from this subpart because they are diesel-fired stationary Reciprocating Internal Combustion Engines (RICE).
11, 13, 15, and 20	40 C.F.R. Part 63 Subpart ZZZZ, Operating limits under Table 2b per 63.6603(a)	Per 63.6603(b)(1), existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP not accessible by the FAHS must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d. These CI RICE units are not subject to the numerical CO emissions limitations or the operating limitations related to oxidation catalysts in Table 2b.
18a, 18b, & 19	40 C.F.R. 60, Subpart Dc – Standards of Performance for Steam Generating Units	These boilers are not affected EUs because their maximum design capacity is less than 10 MMBtu/hr; therefore, not meeting the criteria for maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h) under Subpart Dc.
18a, 18b, & 19	40 C.F.R. 63 Subpart JJJJJJ, NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources	These boilers are gas-fired boilers and 40 C.F.R. 63.11195(e) exempts gas-fired boilers from this subpart.
Section 11. Visible Emissions Forms

VISIBLE EMISSIONS OBSERVATION FORM

This form is designed to be used in conjunction with EPA Method 9, "Visual Determination of the Opacity of Emissions from Stationary Sources." Temporal changes in emission color, plume water droplet content, background color, sky conditions, observer position, etc. should be noted in the comments section adjacent to each minute of readings. Any information not dealt with elsewhere on the form should be noted under Additional Information. Following are brief descriptions of the type of information that needs to be entered on the form. For a more detailed discussion of each part of the form, refer to "Instructions for Use of Visible Emission Observation Form" (a copy is available in https://www3.epa.gov/ttnemc01/methods/webinar8.pdf).

- Source Name: full company name, parent company or division or subsidiary information, if necessary.
- Address: street (not mailing or home office) address of facility where visible emissions observation is being made.
- Phone (Key Contact): number for appropriate contact.
- Stationary Source ID Number: number from NEDS, agency file, etc.
- Process Equipment, Operating Mode: brief description of process equipment (include type of facility) and operating rate, % capacity, and/or mode (e.g. charging, tapping, shutdown).
- Control Equipment, Operating Mode: specify type of control device(s) and % utilization, control efficiency.
- Describe Emission Point: for identification purposes, stack or emission point appearance, location, and geometry; and whether emissions are confined (have a specifically designed outlet) or unconfined (fugitive).
- Height Above Ground Level: stack or emission point height relative to ground level; can use engineering drawings, Abney level, or clinometer.
- Height Relative to Observer: indicate height of emission point relative to the observation point.
- Distance from Observer: distance to emission point; can use rangefinder or map.
- Direction from Observer: direction plume is traveling from observer.
- Describe Emissions and Color: include physical characteristics, plume behavior (e.g., looping, lacy, condensing, fumigating, secondary particle formation, distance plume visible, etc.), and color of emissions (gray, brown, white, red, black, etc.). Note color changes in comments section.
- Visible Water Vapor Present?: check "yes" if visible water vapor is present.
- If Present, note in the Comments column whether the Plume is "attached" if water droplet plume forms prior to exiting stack, and "detached" if water droplet plume forms after exiting stack.
- Point in Plume at Which Opacity was Determined: describe physical location in plume where readings were made (e.g., 1 ft above stack exit or 10 ft. after dissipation of water plume).
- Describe Plume Background: object plume is read against, include texture and atmospheric conditions (e.g., hazy).
- Background Color: sky blue, gray-white, new leaf green, etc.

- Sky Conditions: indicate color of clouds and cloud cover by percentage or by description (clear, scattered, broken, overcast).
- Wind Speed: record wind speed; can use Beaufort wind scale or hand-held anemometer to estimate.
- Wind Direction From: direction from which wind is blowing; can use compass to estimate to eight points.
- Ambient Temperature: in degrees Fahrenheit or Celsius.
- Wet Bulb Temperature: can be measured using a sling psychrometer
- RH Percent: relative humidity measured using a sling psychrometer; use local US Weather Bureau measurements only if nearby.
- Source Layout Sketch: include wind direction, sun position, associated stacks, roads, and other landmarks to fully identify location of emission point and observer position.
- Draw North Arrow: to determine, point line of sight in direction of emission point, place compass beside circle, and draw in arrow parallel to compass needle.
- Sun's Location: point line of sight in direction of emission point, move pen upright along sun location line, mark location of sun when pen's shadow crosses the observer's position.
- · Observation Date: date observations conducted.
- Start Time, End Time: beginning and end times of observation period (e.g., 1635 or 4:35 p.m.).
- Data Set: percent opacity to nearest 5%; enter from left to right starting in left column. Use a second (third, etc.) form, if readings continue beyond 30 minutes. Use dash (-) for readings not made; explain in adjacent comments section.
- Comments: note changing observation conditions, plume characteristics, and/or reasons for missed readings.
- Range of Opacity: note highest and lowest opacity number.
- Observer's Name: print in full.
- Observer's Signature, Date: sign and date after performing VE observation.
- Observer's Affiliation: observer's employer.
- Certifying Organization, Certified By, Date: name of "smoke school," certifying observer, and date of most recent certification.

Permit No. AQ0068TVP04 King Salmon Platform

ALASKA DEPARTMENT OF AIR PERMITS PROGRAM -					OF ENVI - VISIBL	DF ENVIRONMENTAL CONSERVATION VISIBLE EMISSIONS OBSERVATION FORM Page No.				
Stationary Source Nar	me	Type of Em	ission Unit		Observa	ition Da	te	Start 1	lime .	End Time
Emission Unit Locatio	n				Sec Min	0	15	30	45	Comments
City	State		Zip		1					
Phone # (Key Con	tact)	Stationary	Source ID N	Number	2					
Process Equipment	,		Aode		3					
		Operating	Aodo		4					
	//	Operating N	loge		5					
Describe Emission Po	oint/Location	1			6					
Height above ground level	Height relativ	ve to observer	Clinometer R	leading	7					
Distance From Observ Start End	<i>i</i> er	Direction Fi Start	rom Observ End	er	8					
Describe Emissions & Start	Color	End			9					
Visible Water Vapor Prese	nt? If yes, de	termine approx	kimate distant	ce from the	10					
No Yes	Stack exit to	where the plu	ne was read		11					
Point in Plume at Whi	ch Opacity	Was Detern	nined		12					
Describe Plume Back Start	ground	Background Start	d Color		12					
End Sky Conditions:		End			- 13					
Start		End			14					
Wind Speed		Wind Direct	tion From		15					
Start End Ambient Temperature		Start Wet Bulb T	End	RH percent	16					
	+ 1 Stack or	Point Being Re	ad 2 Wind D	irection From	17					
3 Observer Location	4 Sun Locatio	on 5 North	Arrow 6 C	ther Stacks	18					
					19					
					20					
					20					
					21					
					22					
					23					
					24					
					25					
					26					
					27					
					28					
					20					
Additional Information:					23					
					30 Range o	of Opaci	ity.			
					Minimur	n				Maximum
I have received a copy	of these op	acity observ	ations		Print Observer's Name					
Print Name:					Observe	r's Sigr	nature			Date
Signature:				Observer's Affiliation						
Title Date			Certifying Organization:							
			Certified By: Date							
Duration of Observation Period (minutes):				Data Reduction:						
Number of Observations:				Highest	Highest Six-Minute Average Opacity (%):					
Number of Observations exceeding 20%:				18-Cone	ecutive	-Minut	e Averao	re Opacity (%)(engines and turbines only)		
	opuen	,		4		tu S			ende	
Set Number		Tiı	ne	Avera	ige Opaci	iy sumi Opa	nary: city			
		Start	End		Su	m	Ave	rage		Comments
-				1	+		-		+	

Section 12. Material Balance Calculation

If a fuel shipment contains more than 0.75 percent sulfur by weight, calculate the three-hour exhaust concentration of SO_2 using the following equations:



The wt% S_{fuel} , wt% C_{fuel} , and wt% H_{fuel} are equal to the weight percents of sulfur, carbon, and hydrogen, respectively, in the fuel. These percentages should total 100%.

The fuel weight percent of sulfur (wt% S_{fuel}) is obtained pursuant to Condition 14.1.a(ii) or Condition 14.1.b. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (**vol%dryO2**, **exhaust**) is obtained from oxygen meters, manufacturer's data, or from the most recent analysis under 40 C.F.R. 60, Appendix A-2, Method 3, adopted by reference in 18 AAC 50.040(a), at the same emissions unit load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if **wt%S_{fuel}** = 1.0%, then enter 1.0 into the equations not 0.01 and if **vol%dryO2**, exhaust = 3.00%, then enter 3.00, not 0.03.

[18 AAC 50.346(c)]

Section 13. ADEC Notification Form³⁰

King Salmon Platform	AQ0068TVP04
Stationary Source Name	Air Quality Permit Number.
Hilcorp Alaska, LLC	
Company Name	
When did you discover the Excess Emissions/Pern	nit Deviation?
Date: / / 7	Sime::
When did the event/deviation occur?	
Begin: Date: / / Time: _	: (please use 24-hr clock)
End: Date: / Time:	: (please use 24-hr clock)
What was the duration of the event/deviation?	: (hrs:min) ordays
(total # of hrs, min, or days, if intermittent then inclue emissions/deviation)	de only the duration of the actual
Reason for notification (Please check only 1 box and	d go to the corresponding section.):
Excess Emissions - Complete Section 1 and C Note: All "excess emissions" are also "permit dev events that involve excess emissions.	Certify iations." However, use only Section 1 for
Deviation from Permit Conditions - Complete Note: Use only Section 2 for permit deviations that	e Section 2 and Certify t do not involve excess emissions.
\Box Deviation from CODC ³¹ CO ³² on Cottlement	Assessment Committee Continue 2 and Cont

Deviation from COBC³¹, CO³², or Settlement Agreement - Complete Section 2 and Certify

³⁰ Revised as of November 7, 2020.

³¹ Compliance Order By Consent

³² Compliance Order

Section 1. Excess Emissions

(a)	Was the exceedance	termittent	or	Continuous
(b)	Cause of Event (Check one that applied applicable.):	es. Complete a	separate	form for each event, as
[Start Up/Shut Down	Natural Ca	use (we	eather/earthquake/flood)
[Control Equipment Failure	Scheduled	Mainte	nance/Equipment Adjustments
[Bad fuel/coal/gas	Upset Con	dition	
[Other			

(c) **Description**

Describe briefly what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance. Attach supporting information if necessary.

(d) Emissions Units (EU) Involved:

Identify the emissions units involved in the event, using the same identification number and name <u>as in the permit</u>. Identify each emission standard potentially exceeded during the event and the exceedance.

EU ID	EU Name	Permit Condition Exceeded/Limit/Potential Exceedance

(e) **Type of Incident:** (Please check all that apply and provide the value requested, if any):

Opacity%	Venting (gas/scf)
Control Equipment Down	Fugitive Emissions
Emission Limit Exceeded	Marine Vessel Opacity
Flaring	
Other:	

(f) Corrective Actions:

Describe actions taken to restore the system to normal operation and to minimize or eliminate chances of a recurrence. Attach supporting information if necessary.

(g) Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable?	YES	[
Do you intend to assert the affirmative defense of 18 AAC 50.235?	YES	[

Certify Report (<u>go to end of form</u>)

00 |

Section 2. Permit Deviations

- (a) **Permit Deviation Type:** (Check all boxes that apply per event. Complete a separate form for each event, as applicable.)
 - Emissions Unit-Specific Requirements
 - Stationary Source-Wide Specific Requirements
 - Monitoring/Recordkeeping/Reporting Requirements
 - General Source Test Requirements
 - Compliance Certification Requirements
 - Standard/Generally Applicable Requirements
 - Insignificant Emissions Unit Requirements
 - Other:

(b) Emissions Units (EU) Involved:

Identify the emissions units involved in the event, using the same identification number and name as in the permit. List the corresponding permit condition and the deviation.

EU ID EU Name		Permit Condition /Potential Deviation			

(c) **Description of Potential Deviation:**

Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation. Attach supporting information if necessary.

(d) **Corrective Actions:**

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence. Attach supporting information if necessary.

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*). Read and sign the certification in the bottom of the form above. (See Condition 84.)

Submit this report in accordance with the submission instructions on the Department's Standard Permit Conditions web page at

http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-iii-and-iv-submission-instructions/.

If submitted online, report must be submitted by an authorized E-signer for the stationary source (according to Condition 84).

[18 AAC 50.346(b)(3)]