DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY OPERATING PERMIT

Permit No. AQ0269TVP02 Issue Date: Proposed Permit - March 7, 2014
Expiration Date: Five Years

The Department of Environmental Conservation, under the authority of AS 46.14 and 18 AAC 50, issues an operating permit to the Permittee, BP Exploration (Alaska), Inc., for the operation of the Flow Station #3 (FS#3) stationary source.

The Flow Station #3 defined by this permit as the surface structures and their associated permanent emission units located on the FS#3 production pad and Prudhoe Bay Unit drill sites (DS) 6, 7, 13, 14, and 15. These together are considered one stationary source for purposes of determining classification under 18 AAC 50.326(a) and AS 46.14.130(b), and determining the applicable modification thresholds of 18 AAC 50.302. Temporary emission units and mobile equipment (*e.g.*, drill rigs and associated activities and equipment) that periodically operate at the aggregated drill sites are not governed by this permit but are part of FS#3.

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.

Citations listed herein are contained within 18 AAC 50 dated October 6, 2013, Register 208. All Federal regulation citations are from those sections adopted by reference in this version of regulation in 18 AAC 50.040 unless otherwise specified.

All currently applicable stationary source-specific terms and conditions of Operating/ Construction Permit No. AQ0269TVP01 have been incorporated into this operating permit. In addition, the stationary source-specific terms and conditions of Minor Permit No. AQ0269MSS01 and Permit-to-Operate No. 9473-AA012 not amended by Operating/ Construction Permit No. AQ0269TVP01 have been incorporated into this permit.

Upon effective date of this permit, Operating/Construction Permit No. AQ0269TVP01 expires, except the construction permit terms identified by citations specific to Permit No. AQ0269TVP01 remain in effect until modified or replaced by a Title I permitting action under 18 AAC 50.

This Operating Permit becomes effective <insert date—30 days after issue date>.

John F. Kuterbach, Manager
Air Permits Program

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List of Abbreviations Used in this Permit

AAC.....Alaska Administrative Code
ADEC .....Alaska Department of Environmental Conservation
AS .....Alaska Statutes
ASTM.....American Society for Testing and Materials
BACT .....Best Available Control Technology
bbls .....U.S. Petroleum Barrels
BHp .....Boiler Horsepower
bHp .....Brake Horsepower
C.F.R. .....Code of Federal Regulations
The Act .....Clean Air Act
CI .....Compression Ignition
CO .....Carbon Monoxide
CO_2 .....Carbon Dioxide
CO_2e .....Carbon Dioxide Equivalent Emissions
dscf .....Dry standard cubic foot
EPA .....US Environmental Protection Agency
EU.....Emission Unit
FS#3.....Flow Station #3
GHG .....Greenhouse Gas
GPH.....gallons per hour
gr./dscf.....grain per dry standard cubic foot (1 pound = 7000 grains)
HAPs .....Hazardous Air Pollutants [HAPs as defined in AS 46.14.990]
Hp .....Horsepower
H_2S.....Hydrogen Sulfide
ICE.....Internal Combustion Engine
ID.....Emission Unit Identification Number
ISO.....Operating conditions corresponding to sea level and 59 deg. F
kPa.....kiloPascals
kW .....kilowatt
kW-e .....kilowatt electric
LAER.....Lowest Achievable Emission Rate
LHV.....Lower Heating Value
MACT .....Maximum Achievable Control Technology [MACT as defined in 40 C.F.R. 63]
MMBtu .....Million British Thermal Units
MMBtu/hr.....Million British thermal units per hour
MMSCF.....Million standard cubic feet
MMSCF/hr .....Million standard cubic feet per hour
MR&R.....Monitoring, Recordkeeping, and Reporting
NESHAPs.....Federal National Emission Standards for Hazardous Air Pollutants [NESHAPs as contained in 40 C.F.R. 61 and 63]
NO_X .....Nitrogen Oxides
NSPS .....Federal New Source Performance Standards [NSPS as contained in 40 C.F.R. 60]
O & M .....Operation and Maintenance
O_2.....Oxygen
PAL .....Plantwide Applicability Limitation
PM_{10} .....Particulate Matter less than or equal to a nominal ten microns in diameter
ppm .....Parts per million
ppmv, ppmvd.....Parts per million by volume on a dry basis
ppmw.....Parts per million by weight
PS .....Performance Specification
PSD .....Prevention of Significant Deterioration
psia .....Pounds per Square Inch (absolute)
PSI.....Pounds per Square Inch (pressure)
PTE.....Potential to Emit
RICE.....Reciprocating Internal Combustion Engine
RM.....Reference Method
SIC.....Standard Industrial Classification
SO_2 .....Sulfur dioxide
TPH .....Tons per hour
TPY .....Tons per year
VOC .....volatile organic compound [VOC as defined in 40 C.F.R. 51.100(s)]
VOL.....volatile organic liquid [VOL as defined in 40 C.F.R. 60.111b, Subpart Kb]
vol% .....volume percent
wt% .....weight percent

Section 1. Stationary Source Information

Identification

Permittee:		**BP Exploration (Alaska), Inc.** 900 East Benson Blvd. (Zip 99508) P.O. Box 196612 Anchorage, AK 99519-6612	
Stationary Source Name:		**Flow Station #3**	
Location:		Section 3, Township 10N, Range 14E, Umiat Meridian; UTM: Northing: 7794900 Easting: 440750 (Zone 6); or Latitude: 70°15'18"N Longitude: 148°34'19"W (NAD 27)	
Physical Address:		Prudhoe Bay, Alaska	
Owners:		BP Exploration (Alaska) Inc. 900 East Benson Blvd. (Zip 99508) P.O. Box 196612 Anchorage, AK 99519-6612	ConocoPhillips Alaska, Inc. 700 G St. (Zip 99501) P.O. Box 100360 Anchorage, AK 99510-0360
		Chevron USA, Inc. P.O. Box 36366 Houston, TX 77236	ExxonMobil Alaska Production, Inc 3301 C St., Suite 400 (Zip 99503) P.O. Box 196601 Anchorage, AK 99519-6601
Operator:		BP Exploration (Alaska), Inc. 900 East Benson Blvd. (Zip 99508) P.O. Box 196612 Anchorage, AK 99519-6612	
Permittee's Responsible Official:		David Burgess, North Slope East Area Operations Manager	
Designated Agent:		CT Corporation Systems 9360 Glacier Hwy, Suite 202 Juneau, AK 99801 (907) 586-3340	
Stationary Source and Building Contact:		Kevin Smith and Rob Endebrock (907) 659-5592 akopsfs3facilityotl@bp.com	
Fee Contact:		Gregory Arthur, Air Compliance Authority (907) 564-4081 gregory.arthur@bp.com	
Permit Contact:		Gregory Arthur, Air Compliance Authority (907) 564-4081 gregory.arthur@bp.com	
Process Description	SIC Code:	1311 – Crude Petroleum and Natural Gas Production	
	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. Emission Unit Inventory and Description

Emission units listed in Table A have specific monitoring, recordkeeping, or reporting (MR&R) requirements in this permit. Emission unit descriptions and ratings are given for identification purposes only.

Table A - Emission Unit Inventory

EU ID	Tag No.	Emission Unit Name	Emission Unit Description	Rating/Size	Commenced Construction, Startup, or Modification/ Reconstruction Date[(1)]
Group I – Gas Turbines at the Production Pad					
1	NGT-14-1801	GE LM 1500	STV/IP Gas Compressor	14,200 Hp ISO	Prior to 1977
2	NGT-14-1802	GE LM 1500	STV/IP Gas Compressor	14,200 Hp ISO	Prior to 1977
3	NGT-14-1803	GE MS 5352B	LPS Gas Compressor	35,000 Hp ISO	1982
4	NGT-14-1804	GE MS 5352B	LPS Gas Compressor	35,000 Hp ISO	1982
5	NGT-14-1806	GE MS 5322R	Artificial Lift	32,000 Hp ISO	1983
6	NGT-14-15105	EGT (Ruston) TB 5000	Produced Water Injection Pump	4,900 Hp ISO	1982 (construction commenced prior to 10/3/82)
7	NGT-14-15106	EGT (Ruston) TB 5000	Produced Water Injection Pump	4,900 Hp ISO	9/5/79
8	NGT-14-15188	EGT (Ruston) TB 5000	Produced Water Injection Pump	4,900 Hp ISO	10/25/82
9	NGT-14-15189	EGT (Ruston) TB 5000	Produced Water Injection Pump	4,900 Hp ISO	10/25/82
Group II – Gas-Fired Heaters at the Production Pad					
10	NGH-14-1431	Broach Glycol Heater	Heater	38.0 MMBtu/hr (heat input, LHV)	Prior to 1979
11	NGH-14-1481	Broach Glycol Heater	Heater	26.6 MMBtu/hr (heat input, LHV)	Prior to 1979
12	NGH-14-1491	Broach Glycol Heater	Heater	26.6 MMBtu/hr (heat input, LHV)	Prior to 1979
13	NGH-14-2801	BS&B TEG Reboiler	Heater	6.8 MMBtu/hr (heat input, LHV)	Prior to 1979
14	NGH-14-2811	BS&B TEG Reboiler	Heater	6.8 MMBtu/hr (heat input, LHV)	Prior to 1979

EU ID	Tag No.	Emission Unit Name	Emission Unit Description	Rating/Size	Commenced Construction, Startup, or Modification/ Reconstruction Date(1)
Group III – Liquid Fuel-Fired Equipment at the Production Pad					
15	EDG-14-2882	Emerson GM Emergency Generator	Engine	3,600 Hp (2,685 kW)	7/6/77
16	EDG-14-2882-01	Emerson GM Emergency Generator	Engine	3,600 Hp (2,685 kW)	12/31/83
17	EDG-14-1599	Cummins NT-855-F1 Fire Water Pump	Emergency Fire Water Pump Engine	255 Hp	4/1/78
Group IV – Flares at the Production Pad					
18	HP/IP Flares	Emergency Flare	Flare	1.6 MMSCF/day (pilot/sweep/purge/ assist) combined total for all flares	unknown
19	STV Flares	Emergency Flare	Flare		unknown
20	Horizontal Flare	Emergency Flare	Flare		unknown
Group V – Fixed Roof Storage Tanks (> 10,000 gallon capacity) at the Production Pad					
21	14-1962	Produced Water Tank (Primary Separation)	Tank	14,100 bbls[2]	1990
22	14-1951	Overflow/Dirty Water Tank	Tank	9,967 bbls[2]	1981
Group VI – Liquid Fuel-Fired Equipment at Drill Sites 6, 7, 13, 14, and 15					
23	80-805	DS6-Emergency Generator	IC Engine	400 Hp (300 kW)	1987
24	80-807	DS7-Emerson Emergency Generator	IC Engine	400 Hp (300 kW)	1983
25	80-854	DS13-Emergency Generator	IC Engine	940 Hp (700 kW)	1983
26	80-872	DS14-Caterpillar 3512 Emergency Generator	IC Engine	1,300 Hp (965 kW)	1984
27	80-875	DS15-Emerson GM Emergency Generator	IC Engine	1,340 Hp (1,000 kW)	1985

Notes:

1. Date construction commenced (if known) or the startup date of the unit. If a unit has been modified or reconstructed as defined by AS 46.14.990, then the most recent modification or reconstruction date is provided.
2. U.S. petroleum barrels (42 gallons/bbl)

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

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 through 20 and 23 through 27 listed in Table A to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

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

1.1. For EU IDs 1 through 14, burn only gas as fuel. Monitoring for these emission units shall consist of a statement in each operating report under Condition 68 indicating whether each of these emission units fired only gas during the period covered by the report. Report under Condition 67 if any fuel other than gas is burned.

1.2. For each of EU IDs 15 through 17, as long as the individual emission unit does not exceed the applicable rolling 12-month operating time limit in Condition 15 (emergency and non-emergency hours combined), monitoring shall consist of an annual statement of compliance with the visible emissions standard based on reasonable inquiry. Otherwise, monitor, record, and report visible emissions in accordance with Conditions 2 through 4 for that emission unit for the remainder of the permit term.

1.3. For each of EU IDs 23 through 27, as long as the individual emission unit does not exceed 400 hours of total operation (emergency and non-emergency hours combined) per consecutive 12-month period, monitoring shall consist of an annual statement of compliance with the visible emissions standard based on reasonable inquiry. Otherwise, monitor, record, and report visible emissions in accordance with Conditions 2 through 4 for that emission unit for the remainder of the permit term.

1.4. For EU IDs 18 through 20 (flares), monitor, record and report in accordance with Condition 5.

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

Visible Emissions Monitoring, Recordkeeping, and Reporting

Liquid Fuel-Fired Emission Units (EU IDs 15 through 17 and 23 through 27)

2. **Visible Emissions Monitoring.** The Permittee shall observe the exhaust of EU IDs 15 through 17 (as applicable based on Condition 1.2), and EU IDs 23 through 27 (as applicable based on Condition 1.3), or if replaced during the permit term, for visible emissions using the Method 9 Plan under Condition 2.1. The Permittee may for each unit elect to continue the visible emissions monitoring schedule in effect from the previous permit at the time a renewed permit is issued, if applicable.

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

2.1. **Method 9 Plan.** Observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations.[1]

a. **First Method 9 Observation.** For any unit which meets the following criteria observe the exhaust for visible emissions as follows:

(i) For any liquid fuel fired unit listed in Condition 2 replaced during the permit term, observe exhaust for 18 minutes within 30 days of startup.

(ii) For each existing emission unit that exceeds the operational thresholds in Condition 1.2 or Condition 1.3, observe the exhaust for 18 minutes of operations within 45 days after the calendar month during which that threshold has been exceeded, or when the unit is next operated, whichever is later.

b. **Monthly Method 9 Observations.** After the first Method 9 observation required by Condition 2.1a, perform 18-minute observations at least once in each calendar month that an emission unit operates.

c. **Semiannual Method 9 Observations.** After observing emissions for three consecutive operating months under Condition 2.1.b, unless a six-minute average is greater than 15 percent and one or more observations are greater than 20 percent, perform 18-minute observations:

(i) Within six months after the preceding observation, or

(ii) For an emission unit with intermittent operations, during the next scheduled operation immediately following six months after the preceding observation.

d. **Annual Method 9 Observations.** After at least two semiannual observations under Condition 2.1.c, unless a six-minute average is greater than 15 percent and one or more individual observations are greater than 20 percent, perform 18-minute observations:

(i) Within twelve months after the preceding observation; or

(ii) For an emission unit with intermittent operations, during the next scheduled operation immediately following twelve months after the preceding observation.

[1] Emergency operations are exempt from the visible emissions observations deadlines associated with emission unit "operation" under this condition.

e. **Increased Method 9 Frequency.** If a six-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more observations are greater than 20 percent, then increase or maintain the 18-minute observation frequency for that emission unit to at least monthly, as described in Condition 2.1.b, until the criteria in Condition 2.1.c for semiannual monitoring are met.

3. **Visible Emissions Recordkeeping.** When Method 9 monitoring is conducted under Condition 2.1, 10.4 or 11.4, the Permittee shall keep records as follows:

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

3.1. The observer shall record:

a. the name of the stationary source, emission unit and location, emission unit type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet in Section 11;

b. the time, estimated distance to the emissions location, sun location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating mode *(load or fuel consumption rate or best estimate if unknown)* on the sheet at the time opacity observations are initiated and completed;

c. 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;

d. opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation Record in Section 11, and

e. 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.

3.2. To determine the six-minute average opacity, divide the observations recorded on the record sheet into sets of 24 consecutive observations; sets need not be consecutive in time and in no case shall two sets overlap; for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; record the average opacity on the sheet.

3.3. Calculate and record the highest 6 minute and 18-consecutive-minute averages observed.

4. **Visible Emissions Reporting.** When Method 9 monitoring is conducted under Condition 2.1, 10.4 or 11.4 the Permittee shall report visible emissions as follows:

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

4.1. In each operating report under Condition 68, include for the period covered by the report:

a. copies of the observation results (*i.e.*, opacity observations) for each emission unit that used the Method 9 Plan, except for the observations the Permittee has already supplied to the Department;

b. a summary to include:

(i) number of days observations were made;

(ii) highest six-minute average observed; and

(iii) dates when one or more observed six-minute averages were greater than 20 percent under Condition 1 or any observations were greater than 10 percent under Condition 10 or 11 as applicable; and

c. a summary of any monitoring or recordkeeping required under Conditions 2, 3, 10.4, and 11.4 that was not done;

4.2. Report under Condition 67:

a. the results of Method 9 observations that exceed the applicable emission standard under Condition 1, 10 or 11; 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 (EU IDs 18 through 20)

5. **Visible Emissions Monitoring, Recordkeeping, and Reporting.** The Permittee shall observe one daylight flare event[2] within 12 months after the preceding flare event observation or within 12 months after the permit effective date, whichever is later. If no flare event meets that requirement within that 12-month period, then the Permittee shall observe the next daylight flare event. Monitor flare events using Method-9.

5.1. Monitor flare events using Method-9.

5.2. Record the following information for observed events:

a. the flare(s) EU ID number;

b. results of the Method-9 observations;

c. reason(s) for flaring;

d. date, beginning and ending time of event; and

e. volume of gas flared.

[2] For purposes of this permit, a "flare event" is flaring of gas at a rate that exceeds the source's de-minimis pilot, purge, and assist gas rates for a minimum of 18 consecutive minutes. It does not include non-scheduled release operations, *i.e.*, process upsets, emergency flaring, or de-minimis venting of gas incidental to normal operations.

5.3. Monitoring of a flare event may be postponed for safety or weather reasons, or because a qualified observer is not available. If more than 12 months have elapsed since the last qualifying flare event was monitored, and monitoring of a flare event is postponed for any of the reasons described in this condition, the Permittee shall include in the next operating report required by Condition 68, an explanation of the reason that the flare event was not monitored. If no flare events meeting this definition occur during a reporting period then no monitoring or reporting is required.

5.4. Attach copies of the records required by Condition 5.2 with the operating report required by Condition 68 for the period covered by the report.

5.5. Report under Condition 67 whenever the visible emissions standard in Condition 1 is exceeded or the monitoring required under Condition 5 is not completed, except as allowed under Condition 5.3.

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

Particulate Matter Emissions Standards

6. **Industrial Process and Fuel-Burning Equipment Particulate Matter.** The Permittee shall not cause or allow particulate matter emitted from EU IDs 1 through 20 and EU IDs 23 through 27 listed in Table A to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

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

6.1. For EU IDs 1 through 14, burn only gas as fuel. Monitoring for these emission units shall consist of a statement in each operating report under Condition 68 indicating whether each of these emission units fired only gas during the period covered by the report. Report under Condition 67 if any fuel other than gas is burned.

6.2. For each of EU IDs 15 through 17, as long as the individual emission unit does not exceed the applicable rolling 12-month operating time limit in Condition 15 (emergency and non-emergency hours combined), monitoring shall consist of an annual statement of compliance with the particulate matter standard based on reasonable inquiry. Otherwise, monitor, record, and report in accordance with Conditions 7 and 8, for that emission unit for the remainder of the permit term.

6.3. For each of EU IDs 23 through 27, as long as the individual emission unit does not exceed 400 hours of total operation (emergency and non-emergency hours combined) per consecutive 12-month period, monitoring shall consist of an annual statement of compliance with the particulate matter standard based on reasonable inquiry. Otherwise, monitor, record, and report in accordance with Conditions 7 and 8, for that emission unit for the remainder of the permit term.

6.4. For EU IDs 18 through 20 (flares), the Permittee shall annually certify compliance under Condition 69 with the particulate matter standard.

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

PM Monitoring, Recordkeeping and Reporting

Liquid Fuel-Fired Engines (EU IDs 15 through 17 and 23 through 27)

7. **Particulate Matter Monitoring for Diesel Engines.** The Permittee shall conduct source tests on diesel engines, EU IDs 15 through 17, if required by Condition 6.2, and EU IDs 23 through 27, if required by Condition 6.3, to determine the concentration of particulate matter (PM) in the exhaust as follows:

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

7.1. Except as provided in Condition 7.4, within six months of exceeding the criteria of Condition 7.2.a or 7.2.b, either:

a. conduct a PM source test according to requirements set out in Section 6; or

b. make repairs so that emissions no longer exceed the criteria of Condition 7.2; to show that emissions are below those criteria, observe emissions as described in Condition 2.1 under load conditions comparable to those when the criteria were exceeded.

7.2. Conduct the PM source test or make repairs according to Condition 7.1 if:

a. 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity greater than 20 percent; or

b. for an emission unit with an exhaust stack diameter that is less than 18 inches, 18 consecutive minutes of Method 9 observations result in an 18-minute average opacity that is greater than 15 percent and not more than 20 percent, unless the Department has waived this requirement in writing.

7.3. During each one-hour PM source test run, observe the exhaust for 60 minutes in accordance with Method 9 and calculate the greatest average 6-minute opacity measured during each one-hour test run. Submit a copy of these observations with the source test report.

7.4. The automatic PM source test requirement in Conditions 7.1 and 7.2 is waived for an emissions unit if a PM source test on that unit has shown compliance with the PM standard during this permit term.

8. **Particulate Matter Reporting for Diesel Engines**. The Permittee shall report as follows:

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

8.1. Report under Condition 67

a. the results of any PM source test that exceed the PM emissions limit; or

b. if one of the criteria of Condition 7.2 was exceeded and the Permittee did not comply with either Condition 7.1.a or 7.1.b. This must be reported by the day following the day compliance with Condition 7.1 was required; or

c. within 30 days of the end of the month in which the observations occur for observations in excess of the thresholds of Condition 7.2.a or 7.2.b.

8.2. In each operating report under Condition 68, include for the period covered by the report:

a. the dates, EU ID(s), and results when an observed 18-minute average opacity was greater than an applicable threshold in Condition 7.2;

b. a summary of the results of any PM testing under Condition 7; and

c. copies of any visible emissions observation results (opacity observations) greater than the thresholds of Condition 7.2, if they were not already submitted.

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

Sulfur Compound Emission Standards Requirements

9. **Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from EU IDs 1 through 20 and 23 through 27 to exceed 500 ppm averaged over three hours.

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

Monitoring and Reporting for Fuel Gas[3]

(EU IDs 1 through 14 and 18 through 20)

9.1. **Monitoring.** For EU IDs 3 through 9, the Permittee shall comply with this limit according to Conditions 31.1 and 31.2.

9.2. **Monitoring.** For EU IDs 1, 2, through 14, and 18 through 20, the Permittee shall analyze a representative sample of the fuel gas supply monthly to determine the sulfur content using either ASTM D4084, D5504, D4810, D4913, D6228 or GPA Standard 2377, or a listed method approved in 18 AAC 50.035(b)-(c) or 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1).

9.3. **Recordkeeping.** Keep records of the sulfur content analysis or demonstration required under Conditions 9.1 and 9.2.

9.4. **Reporting.** The Permittee shall:

a. Report as excess emissions, in accordance with Condition 67, whenever the fuel combusted causes sulfur compound emissions to exceed the standard of Condition 9.

b. Include copies of the records required by Condition 9.3 with the operating report required by Condition 68 for the period covered by the report.

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

[3] *Fuel gas* as the term is used in the context of this condition is described generally by the definition of natural gas found in 40 C.F.R. 60.41b.

Monitoring and Reporting for North Slope Liquid Fuel

(EU IDs 15 through 17 and 23 through 27)

9.5. For liquid fuel from a North Slope topping plant, the Permittee shall obtain from the topping plant the results of a monthly fuel sulfur analysis.

a. The Permittee shall include in the operating report required by Condition 68 a list of the sulfur content(s) measured for each month covered by the report.

b. If the fuel contains greater than 0.75 percent sulfur by weight, the Permittee shall calculate SO_2 emissions in ppm using either the SO_2 material balance calculation in Section 13 or Method 19 of 40 C.F.R. 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a).

c. If SO_2 emissions are calculated under Condition 9.5.b to exceed 500 ppm, the Permittee shall report under Condition 67. The report shall document the calculation under Condition 9.5.b.

d. For fuel with a sulfur content greater than 0.75 percent by weight, the Permittee shall include in the operating report required by Condition 68 the SO_2 emissions calculated in ppm under Condition 9.5.b.

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

Monitoring and Reporting for Other Fuel Oil[4]

(EU IDs 15 through 17 and 23 through 27)

9.6. The Permittee shall comply with either Condition 9.6.a or 9.6.b for fuel obtained from a third-party supplier:

a. For each shipment of fuel:

(i) If the fuel grade requires a sulfur content less than 0.14 percent by weight, keep receipts that specify the fuel grade, maximum sulfur content of the fuel grade, and amount received; or

(ii) If the fuel grade does not require a sulfur content less than 0.14 percent by weight, keep receipts that specify the fuel grade and amount received, and

(A) test the fuel for sulfur content using 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); 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.

[4] *Oil* as the term is used in the context of this condition is described generally as 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.

b. Analyze at least monthly the sulfur content of the liquid fuel in each storage tank that supplies fuel to EU IDs 15 through 17 and 23 through 27 using 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).

9.7. If a shipment of fuel under Condition 9.6.a contains greater than 0.75 percent sulfur by weight, or the results of the sample analyses under Condition 9.6.b indicate that the stored fuel contains greater than 0.75 percent sulfur by weight, the Permittee shall calculate SO_2 emissions in ppm using either the Material Balance Calculation shown in Section 13 or Method 19 of 40 C.F.R. 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a).

9.8. The Permittee shall report as follows:

a. If SO_2 emissions calculated under Condition 9.7 exceed 500 ppm, the Permittee shall report under Condition 67. The report shall document the calculation under Condition 9.7.

b. The Permittee shall include in the operating report required by Condition 68:

(i) a list of the fuel grades received at the stationary source during the reporting period;

(ii) for any fuel grade with a maximum fuel sulfur greater than 0.14 percent sulfur, the fuel sulfur content of each shipment; and

(iii) the results of all fuel sulfur analyses conducted under Condition 9.6.b during the reporting period and documentation of the method(s) used to complete the analyses; and

(iv) for fuel with a sulfur content greater than 0.75 percent, the SO_2 emissions calculated in ppm under Condition 9.7.

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

Pre-Construction[5] Permit Requirements

BACT Emission Limits - NO_X, CO, PM, and Opacity Emission Limits

EU IDs 3 through 7

10. The Permittee shall limit actual emissions from the turbines, EU IDs 3 through 7, as indicated in Table B below. Limits in Table B are not to be exceeded.

[5] *Pre-Construction* refers to permits issued pursuant to regulations approved or promulgated through rulemaking under Title I of the Act, including State and Federal PSD permits and State-issued Permits-to-Operate (prior to January 18, 1997), construction permits issued effective January 18, 1997 or later, and minor permits issued effective October 1, 2004 or later.

10.1. The Permittee shall calculate the monthly and the consecutive 12-month summation of emissions for NO_X, CO, and PM for EU IDs 3 through 7. Use the emission factors found in Table E, Section 12 of this permit, or the latest emission factor obtained from a representative performance test completed under Conditions 10.5 and 10.6, along with the hours of operation and/or amount of fuel used, to calculate the monthly emissions for each unit.

10.2. Report the monthly and the consecutive 12-month period summation of emissions from Condition 10.1, for each month of the reporting period, with each operating report required by Condition 68.

10.3. Notify the Department per Condition 67 should the consecutive 12-month summation of emissions of any air pollutant exceed the limit for that pollutant in Table B.

10.4. **Opacity Monitoring**. For EU IDs 3 through 7, monitor and report in accordance with Condition 1.1 and maintain records demonstrating that each unit is well-maintained and properly operated.

a. For each of EU IDs 3 through 7, record any observations of visible emissions (excluding condensed water vapor) in excess of the opacity limit in Table B.

b. If continuous visible emissions (excluding condensed water vapor) are observed for longer than 3 minutes, initiate corrective actions.

(i) For each emission unit with observable visible emissions under Condition 10.4.b, initiate corrective actions within 24-hours to eliminate visible emissions;

(ii) Keep a written record of the starting date, the completion date, and a description of the actions taken to eliminate the visible emissions;

(iii) Observe the unit at least once each day for the next 7 operating days to ensure that the corrective action has been successful in eliminating visible emissions. After the 7 operating days, if the corrective actions taken have not eliminated the visible emissions, then observe the unit using EPA Method 9 within 24-hours. This observation shall be conducted as specified by 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations. As necessary, take additional corrective actions to eliminate visible emissions and repeat the monitoring, recordkeeping and reporting steps of Condition 10.4.b until visible emissions are eliminated.

c. Record and report as required under Conditions 3.1, 4.1 and 4.2.a except report results compared to the 10 percent opacity limit instead of 20 percent opacity.

d. Provide a copy of the records required under Condition 10.4.b(ii) in the operating report required under Condition 68 for the period covered by the report.

10.5. **NO_X Monitoring**. For EU IDs 3 through 7, monitor, record, and report in accordance with Conditions 30.4 through 30.6 to demonstrate compliance with the short-term BACT NO_X emission limits in Table B. Use test results and emission rate methodology (either 40 CFR 60, Appendix A, Method 19 or Methods 1-4 with fuel consumption rates) to calculate and update NO_X emission factors under Section 12.

10.6. **CO and PM BACT Recurring Testing**. The Permittee shall monitor compliance with the short-term CO and PM BACT limits in Table B for EU IDs 3 through 7 by conducting source tests on either EU ID 3 or 4; EU ID 5; and EU ID 6 or 7 or document completion of substitute source testing conducted on a representative turbine as allowed under Condition 10.6.b to demonstrate compliance with each limit. Use test results and emission rate methodology (either 40 CFR 60, Appendix A, Method 19 or Methods 1-4 with fuel consumption rates) to calculate and update NO_X emission factors under Section 12. Record and report results of the source tests in accordance with Section 6.

a. If all turbines within a group (EU IDs 3 and 4 are in a "group", EU ID 5 is in a "group", and EU IDs 6 and 7 are in a "group") have a run time of less than 400 hours in all consecutive 12-month periods in the preceding 5 years, then no source testing or representative source testing is required for that group.

(i) Report according to Condition 30.6.b if the situation in Condition 10.6.a occurs.

b. Test a unit in the same make/model/design group within 12[6] months after exceeding 400 hours of run time in any 12-month period ending after the effective date of this permit if a test has not been completed on any representative unit of the turbine group during the previous 4 years. Substituting test data is allowed if the Permittee documents the intent to perform substitute testing for multiple turbines and meets all other requirements of Conditions 30.4.b(i) through 30.4.b(iii) as they apply to CO and PM testing.

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)]
[Federal Prudhoe Bay Unit PSD Permit No. PSD-X80-09, as amended 8/29/97]
[Operating/Construction Permit no. AQ0269TVP01, Condition 6, Table 2, 3/31/03]

[6] A turbine make/model/design "group" for source test substitution purposes may be expanded beyond the "groups" defined in Condition 10.6.b to include turbines located at other stationary sources operated by the Permittee in Prudhoe Bay as long as the requirements of Conditions 30.4.b(i) and 30.4.b(ii) are met. EU IDs 6 and 7 are in the same group as EU IDs 8 and 9.

10.7. Keep records that demonstrate that the units EU ID 3 through 7 operated using good combustion practices. Monitoring for these emission units shall also consist of a statement in each operating report required under Condition 68 indicating whether the Permittee operated the units as required during the period covered by the report.

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

Table B – Turbine BACT Emissions Limits (GE/MS5352B Turbines NGT-14-1803 and NGT-14-1804, GE/MS5322R Turbine NGT-14-1806 and Ruston/TB5000 Turbines NGT-14-15105 and NGT-14-15106)

Pollutant	EU ID No.	Turbine Make/Model	Equipment Tag Number	Emission Limit (short-term) per Individual Turbine	Annual Emission Limit per Individual Turbine (TPY)
NO_X	3	GE/MS5352B	14-1803	173 ppmvd @ 15% O_2	1,115
	4	GE/MS5352B	14-1804	173 ppmvd @ 15% O_2	1,115
	5	GE/MS5322R	14-1806	216 ppmvd @ 15% O_2	1,016
	6	Ruston/TB5000	14-15105	154 ppmvd @ 15% O_2	141
	7	Ruston/TB5000	14-15106	154 ppmvd @ 15% O_2	141
CO	3	GE/MS5352B	14-1803	0.17 lb/MMBtu for each unit	269
	4	GE/MS5352B	14-1804		269
	5	GE/MS5322R	14-1806		196
	6	Ruston/TB5000	14-15105		38
	7	Ruston/TB5000	14-15106		38
PM	3	GE/MS5352B	14-1803	0.014 lb/MMBtu for each unit	22
	4	GE/MS5352B	14-1804		22
	5	GE/MS5322R	14-1806		16
	6	Ruston/TB5000	14-15105		3.2
	7	Ruston/TB5000	14-15106		3.2
Opacity	3	GE/MS5352B	14-1803	10%, for each unit	No limit
	4	GE/MS5352B	14-1804		
	5	GE/MS5322R	14-1806		
	6	Ruston/TB5000	14-15105		
	7	Ruston/TB5000	14-15106		

Notes

1) All limits are EPA BACT limits from permit PSD-X80-09.
2) ADEC interprets the turbine short-term emission limits to only apply at full load standard conditions (with NO_X corrected to ISO conditions).
3) Good combustion practices must be used at all times.

BACT Emission Limits - NO_X, CO, SO_2, PM, and Opacity Emission Limits

EU IDs 8 and 9

11. The Permittee shall limit actual emissions from EU IDs 8 and 9 as shown in Table C below. Limits in Table C are not to be exceeded.

11.1. The Permittee shall calculate the monthly and the consecutive 12-month summation of emissions for NO_X, CO, SO_2, and PM for EU IDs 8 and 9. Use the emission factors found in Section 12 of this permit, or the latest emission factor obtained from the most recent performance test completed under Conditions 11.5 and 11.6, along with the hours of operation and/or amount of fuel used, to calculate the monthly emissions for each unit.

11.2. Report the monthly and the consecutive 12-month period summation of emissions from Condition 11.1, for each month of the reporting period, with each operating report required by Condition 68.

11.3. Notify the Department per Condition 67 should the consecutive 12-month summation of emissions of any air pollutant exceed the limit for that pollutant in Table C.

11.4. **Opacity Monitoring**. For EU IDs 8 and 9, monitor and report in accordance with Condition 1.1 and maintain records demonstrating that each unit is well-maintained and properly operated

a. For each of EU IDs 8 and 9, record any observations of visible emissions (excluding condensed water vapor) in excess of the opacity limit in Table C.

b. If continuous visible emissions (excluding condensed water vapor) are observed for longer than 3 minutes, initiate corrective actions.

(i) For each emission unit with observable visible emissions under Condition 11.4.b, initiate corrective actions within 24-hours to eliminate visible emissions;

(ii) Keep a written record of the starting date, the completion date, and a description of the actions taken to eliminate the visible emissions;

(iii) Observe the unit at least once each day for the next 7 operating days to ensure that the corrective action has been successful in eliminating visible emissions. After the 7 operating days, if the corrective actions taken have not eliminated the visible emissions, then observe the unit using EPA Method 9 within 24-hours. This observation shall be conducted as specified by 40 C.F.R. 60, Appendix A-4, Method 9, adopted by reference in 18 AAC 50.040(a), for 18 minutes to obtain 72 consecutive 15-second opacity observations. As necessary, take additional corrective actions to eliminate visible emissions and repeat the monitoring, recordkeeping and reporting steps of Condition 10.4.b until visible emissions are eliminated.

c. Record and report as required under Conditions 3.1, 4.1 and 4.2.a except report results compared to the 10 percent opacity limit instead of 20 percent opacity.

d. Provide a copy of the records required under Condition 11.4.b(ii) in the operating report required under Condition 68 for the period covered by the report.

11.5. **NO_X Monitoring**. For EU IDs 8 and 9, monitor, record, and report in accordance with Conditions 30.4 through 30.6 to demonstrate compliance with the short-term BACT NO_X emission limits in Table C. Use emission rate methodology (either 40 CFR 60, Appendix A, Method 1-4 or Method 19 with measured fuel consumption rates) to calculate and update emission factors listed in Section 12.

11.6. **CO BACT Recurring Testing**. The Permittee shall monitor compliance with the short-term CO BACT limit in Table C for EU IDs 8 and 9 by conducting a source test on either EU ID 8 or 9 or document completion of substitute source testing conducted on a representative turbine as allowed under Condition 11.6.b to demonstrate compliance with the limit. Record and report results of the source test in accordance with Section 6. Use emission rate methodology (either 40 CFR 60, Appendix A, Method 1-4 or Method 19 with measured fuel consumption rates) to calculate and update emission factors listed in Section 6.

a. If all turbines within a group (EU IDs 8 and 9 are in a "group") have a run time of less than 400 hours in all consecutive 12-month periods in the preceding 5 years, no source testing is required for that group.

(i) Report according to Condition 30.6.b if the situation in Condition 11.6.a occurs.

b. Test a unit in the same make/model/design group[6] within 12 months after exceeding 400 hours of run time in any 12-month period ending after the effective date of this permit if a test has not been completed on any representative unit of the turbine group during the previous 4 years. Substituting test data is allowed if the Permittee documents the intent to perform substitute testing for multiple turbines and meets all other requirements of Conditions 30.4.b(i) through 30.4.b(iii) as they apply to CO testing.

[18 AAC 50.040(j), & 50.326(j)]
[40 C.F.R. 71.6(a)]
[Federal Prudhoe Bay Unit PSD Permit No. PSD-X81-13, as amended 8/29/97]
[Operating/Construction Permit No. AQ0269TVP01, Condition 7, Table 3, 3/31/03]

11.7. Keep records that demonstrate that the units EU ID 3 through 12 operated using good combustion practices. Monitoring for these emission units shall also consist of a statement in each operating report required under Condition 68 indicating whether the Permittee operated the units as required during the period covered by the report.

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

Table C – Turbine BACT Emissions Limits (Ruston/TB5000 Turbines NGT-14-15105 and NGT-14-15106)

Pollutant	EU ID No.	Turbine Make/Model	Equipment Tag Number	Emission Limit (short-term) per Individual Turbine	Annual Emission Limit per Individual Turbine (TPY)
NO_X	8	Ruston/TB5000	14-15188	154 ppmvd @ 15% O_2	141
	9	Ruston/TB5000	14-15189	154 ppmvd @ 15% O_2	141
CO	8	Ruston/TB5000	14-15188	0.17 lb/MMBtu for each unit	38
	9	Ruston/TB5000	14-15189		38
SO_2	8	Ruston/TB5000	14-15188	No Limit	1.2
	9	Ruston/TB5000	14-15189		1.2
PM	8	Ruston/TB5000	14-15188	No Limit	3.2
	9	Ruston/TB5000	14-15189		3.2
Opacity	8	Ruston/TB5000	14-15188	10%, for each unit	No limit
	9	Ruston/TB5000	14-15189		

Notes:

1) All limits are EPA BACT limits from permit PSD-X81-13.
2) ADEC interprets the turbine short-term emission limits to only apply at full load and standard conditions (with NO_X corrected to ISO conditions).
3) Good combustion practices must be used at all times.

Fuel Consumption Monitoring

EU IDs 1 through 20 and 23 through 27

12. The Permittee shall maintain and operate monitoring devices (*e.g.*, fuel gas meters) or provide other means of estimating fuel consumption to determine the total volume of fuel gas consumed by the Group I emission units (EU IDs 1 through 9). For other fuel-burning equipment (Group II: EU IDs 10 through 14, Group III: EU IDs 15 through 17, Group IV: EU IDs 18 through 20, and Group VI: EU IDs 23 through 27) the fuel consumption may be estimated.

    12.1. Monitor and record each type of fuel and the total quantity burned in each emission unit group (Groups I, II, III, IV, and VI) and the stationary source-wide totals for each fuel type on a monthly basis.

    12.2. Report using the operating report under Condition 68, the monthly total fuel consumption (MMscf/month for gas-fired emission units and gallons/month for liquid fuel-fired emission units) for each emission unit group (Groups I, II, III, IV, and VI) and the stationary source total fuel consumption, for each month of the reporting period.

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)]
[Permit-to-Operate No. 9473-AA012, Condition 7 and Exhibits C & D, as amended through 7/29/96]

Hours of Operation Monitoring

EU IDs 1 through 17 and 23 through 27

13. The Permittee shall monitor, record, and report the hours of operation as follows:

    13.1. Monitor and record the monthly operating time for each of EU IDs 1 through 17 and 23 through 27.

    13.2. Report using the operating report required under Condition 68, the data recorded under Condition 13.1, for each month of the reporting period.

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)]
[Permit-to-Operate No. 9473-AA012, Exhibit D, as amended through 7/29/96]

Operating Hours Limits

EU IDs 1 and 2

14. The Permittee shall operate the turbines, EU IDs 1 and 2, no more than a combined total of 12,000 hours per consecutive 12-month period.

    14.1. Monitor and record the monthly combined hours of operation and the consecutive 12-month period summation of the combined hours of operation for EU IDs 1 and 2.

    14.2. For each month of the reporting period, report the data recorded under Condition 14.1 with the operating report required by Condition 68.

    14.3. Report under Condition 67 if the combined consecutive 12-month total hours of operation for any given month exceed the limit for EU IDs 1 and 2 in Condition 14. Include with the report documentation of the reason the operating time limit was exceeded.

[18 AAC 50.040(j), & 50.326(j)]
[40 C.F.R. 71.6(a)]
[Permit-to-Operate No. 9473-AA012, Exhibit B, as amended through 7/29/96]

Operating Hours Limits

EU IDs 15 through 17

15. The Permittee shall operate EU IDs 15 through 17 no more than 200 hours each per consecutive 12-month period.

    15.1. Monitor and record the monthly hours of operation and the consecutive 12-month period summation of operational hours for each of EU IDs 15 through 17.

    15.2. For each month of the reporting period, report the data recorded under Condition 15.1 with the operating report required by Condition 68.

15.3. Report under Condition 67 if the consecutive 12-month period total hours of operation for any given month exceed the limit for EU IDs 15 through 17 in Condition 15. Include with the report documentation of the reason the operating time limit was exceeded.

[18 AAC 50.040(j), & 50.326(j)]
[40 C.F.R. 71.6(a)]
[Permit-to-Operate No. 9473-AA012, Exhibit B, as amended through 7/29/96]

Operating Hours Limit (Owner Requested Limit)

EU IDs 23 through 27

16. Beginning in 2014, the Permittee shall not operate EU IDs 23 through 27 in any non-emergency situation other than for purposes of maintenance checks and readiness testing and shall limit checks and testing to no more than 100 hours per engine per calendar year, except as allowed under Condition 34.3.c. There is no time limit on the use of these engines in emergency situations under Condition 16.

16.1. Monitor the operating time for each of EU IDs 23 through 27 as required under Condition 34.4.

16.2. Record the monthly and calendar year-to-date total operating time for each of EU IDs 23 through 27 and record the emergency and non-emergency operating time information required under Condition 36.2. In addition, keep a record describing the reason for non-emergency operation.

16.3. For each month of the reporting period, report the data recorded under Condition 16.2 with the operating report required by Condition 68.

16.4. Report under Condition 67 if the calendar year total hours of operation exceed the maintenance checks and readiness testing limit under Condition 16 for any of EU IDs 23 through 27 or if any of EU IDs 23 through 27 is operated for any non-emergency purpose other than maintenance checks and readiness testing.

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

Fuel Gas H_2S Content Limit (Owner Requested Limit)

EU IDs 1 through 14 and 18 through 20

17. The Permittee shall not use fuel gas in EU IDs 1 through 14 and 18 through 20 with an H_2S concentration that exceeds 100 ppmv annual average at standard conditions, or 133 ppmv instantaneous at standard conditions, at any time.

17.1. Monitor and record according to Conditions 9.1, 9.2, and 9.3.

17.2. Report the recorded monthly fuel gas H_2S concentration and the consecutive 12-month period average fuel gas H_2S concentration, for each month of the reporting period, with each operating report required by Condition 68.

17.3. Notify the Department per Condition 67 if the recorded monthly fuel gas H_2S concentration or the consecutive 12-month period average fuel gas H_2S concentration exceeds the applicable limit in Condition 17.

[18 AAC 50.040(j), & 50.326(j)]
[40 C.F.R. 71.6(a)]
[Conditions 1, 2, and 6, Minor Permit No. AQ0269MSS01, 11/21/05]

Liquid Fuel Sulfur Content Limit (Owner Requested Limit)

EU IDs 15 through 17

18. The Permittee shall not use liquid fuel in EU IDs 15 through 17 with a sulfur concentration that exceeds 0.14 percent by weight.

18.1. When using liquid fuel from a North Slope topping plant, record and report in accordance with Conditions 9.5 and 9.5.a.

18.2. When using liquid fuel from a third-party supplier, record and report in accordance with Conditions 9.6, 9.8.b(i), and 9.8.b(ii).

18.3. Notify the Department per Condition 67 should the recorded monthly liquid fuel sulfur concentration exceed the limit in Condition 18.

[18 AAC 50.040(j), & 50.326(j)]
[40 C.F.R. 71.6(a)]
[Conditions 3 and 5, Minor Permit No. AQ0269MSS01, 11/21/05]

Closed Vent System and Control Device (Owner Requested Limit)

EU ID 21

19. The Permittee shall maintain and operate EU ID 21 with a closed vent system and control device meeting the specifications of 40 C.F.R. 60.112b(a)(3). The Permittee is not otherwise subject to any provision of 40 C.F.R. Part 60, Subpart Kb for EU ID 21.

19.1. Operate the closed vent system and monitor closed vent system parameters in accordance with the operating plan submitted to the Administrator (see Attachment B).

19.2. Maintain records of the operating plan and the measured values of the parameters monitored in accordance with the operating plan.

19.3. Report in accordance with Condition 67 any time the closed vent system and/or control device for EU ID 21 are not operated in accordance with 40 C.F.R. 60.112b(a)(3).

[18 AAC 50.040(j) and 50.326(j)]
[EPA letter, Re: NSPS Subpart Kb Non-applicability 08/11/05]
[40 C.F.R. 71.6(a)(3)]

Stationary Source-Wide Specific Requirements

Insignificant Emission Units

20. For emission units at the stationary source that are insignificant as defined in 18 AAC 50.326(d)-(i) that are not listed in this permit, the following apply:

20.1. **VE Standard:** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process or fuel-burning equipment to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.055(a)(1)]

20.2. **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)]

20.3. **Sulfur Standard:** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO_2, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c)]

20.4. **General MR&R for Insignificant Emission Units**

a. The Permittee shall submit the certification of compliance of Condition 69 based on reasonable inquiry;

b. The Permittee shall comply with the requirements of Condition 50;

c. The Permittee shall report in the operating report required by Condition 68 if an emission unit is insignificant because of historical actual emissions less than the thresholds of 18 AAC 50.326(e) and current actual emissions become greater than any of those thresholds; and

d. No other monitoring, recordkeeping or reporting is required.

[18 AAC 50.346(b)(4)]

Section 4. Federal Requirements

Emission Units Subject to Federal NSPS

21. **NSPS Subpart A Notification.** For any affected facility[7] or existing facility[8] regulated under NSPS requirements in 40 C.F.R. 60, the Permittee shall furnish the Department and EPA written or electronic notification of:

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

21.1. the date that construction or reconstruction of an affected facility is commenced postmarked no later than 30 days after such date;

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

21.2. 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]

21.3. 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), 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.

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

21.4. any proposed replacement of components at 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 60 days (or as soon as practicable) before construction of the replacements is commenced, and must include the following information:

[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 which are to be replaced,

7 *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.

8 *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.

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 New Source Performance Standards after the proposed replacements.

22. **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 any of EU IDs 3 through 9, and 22, any malfunctions of associated air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for any of EU IDs 3 through 9, or 22 is inoperative.

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

23. **NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report.** Except as provided for in Condition 31.4.a(iii), the Permittee shall submit excess emissions and monitoring systems performance (EEMSP) reports and/or summary report forms for EU IDs 3 through 9 to the Department and the Administrator **annually** by the 30th day following the end of each calendar year[9,10]. Except as provided for in Condition 24.1, submit the EEMSP reports with the summary report form as required in Condition 24. 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 & 60.334(j), Subpart GG]
[EPA letter, Re: Custom Fuel Monitoring Schedule, 10/18/93]

23.1. 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]

23.2. Specific identification of each period of excess emissions that occurred during startups, shutdowns, and malfunctions of EU IDs 3 through 9; 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]

23.3. When no excess emissions have occurred, such information shall be stated in the report.

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

[9] Periods of excess emissions and monitor downtime are defined in 40 C.F.R. 60.334(j)(2) for Subpart GG-affected units.
[10] The Permittee obtained EPA approval for annual instead of semi-annual fuel sulfur reporting in a letter from Jim McCormick (EPA Region 10) to Arco Alaska, Inc. dated Oct. 18, 1993.

24. **NSPS Subpart A Summary Report Form.** Except as provided for in Condition 31.4.a(iii), the Permittee shall submit to the Department and to EPA one "summary report form" containing the information and in the format shown in Figure 1 of 40 C.F.R. 60.7[11] unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored for EU IDs 3 through 9. The report shall be submitted according to the schedule required by Condition 23 as follows:

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

24.1. 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 only the summary report form **unless** the EEMSP report described in Condition 23 is requested by the Administrator; or

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

24.2. 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** described in Condition 23.

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

25. **NSPS Subpart A Performance (Source) Tests.** The Permittee shall conduct source tests according to the applicable requirements of 40 C.F.R. 60.8 and Section 6 on any affected facility within 60 days after achieving the maximum production rate at which the unit will be operated, but not later than 180 days after initial startup, and at such other times as may be required by the EPA, and shall provide the Department and EPA with a written report of the results of the source tests.

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

26. **NSPS Subpart A Good Air Pollution Control Practice.** At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU IDs 3 through 9, and 22, including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating 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, opacity observations, review of operating and maintenance procedures, and inspections of EU IDs 3 through 9, and 22.

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

[11] See Summary Report Form in Attachment A of the Statement of Basis.

27. **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 Condition 29, 30, or 31, 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 3 through 9, 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]

28. **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 Condition 29, 30 or 31. 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]

Petroleum Liquid Storage Vessels (Tanks) Subject to NSPS Subpart Ka

EU ID 22

29. **NSPS Subpart Ka Requirements.** The Permittee shall maintain and operate EU ID 22 with a vapor recovery system meeting the specifications of 40 C.F.R. 60.112a(a)(3) and in accordance with the Operations and Maintenance Plan developed in compliance with 40 C.F.R. 60.113a(a)(2)(iii).

[18 AAC 50.040(a)(2)(L)]
[40 C.F.R. 60.112a(a)(3), Subpart Ka]

Turbines Subject to NSPS Subpart GG

EU IDs 3 through 9[12]

30. **NSPS Subpart GG NO_X Standard.** The Permittee shall not allow the exhaust gas concentration of NO_X from EU IDs 3, 4, 5, 8, and 9 to exceed the following:

30.1. EU IDs 3 and 4 shall not exceed 173 ppmvd at 15 percent O_2, ISO corrected.

30.2. EU ID 5 shall not exceed 216 ppmvd at 15 percent O_2, ISO corrected.

30.3. EU IDs 8 and 9 shall not exceed 154 ppmvd at 15 percent O_2, ISO corrected.

[18 AAC 50.040(a)(2)(V)]
[40 C.F.R. 60.332(a)(2) & (d), Subpart GG]

30.4. **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)]

[12] EU IDs 6 and 7 are exempt from Subpart GG NO_X requirements because they satisfy the exemptions listed in 40 C.F.R. 60.332(e). However, for permit streamlining, the Department lists EU IDs 6 and 7 under the periodic testing provision for NO_X BACT compliance.

a. **Periodic Testing.** For each turbine subject to Conditions 10, 11 and/or 30, the Permittee shall satisfy either Condition 30.4.a(i) or 30.4.a(ii).

(i) For an existing turbine whose latest emissions source testing was certified as operating at less than or equal to 90 percent of the most stringent applicable limit shown in Conditions 10, 11, and 30, 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 by the schedule below:

(A) Within 1 year of the effective date of this permit if the most recent source test or substitute source test for the affected unit occurred greater than four years prior to the effective date of this permit and the turbine operated 400 hours or more in any 12-month period (trigger event) ending during any of the 6 months that precede the permit effective date, or

(B) Within 1 year after a trigger event (as defined in Condition 30.4.a(i)(A)) if the last source test occurred greater than 4 years prior to the trigger event at any time during the permit term.

(ii) For an existing turbine whose latest emissions source testing was certified as operating at greater than 90 percent of any of the applicable limits shown in Conditions 10, 11, and/or 30, 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 applicable limits of Conditions 10, 11, and/or 30.

b. **Substituting Test Data**. The Permittee may use a source test under Condition 30.4.a performed on only one of a group of turbines to satisfy the requirements of those conditions 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 applicable emission limits of Conditions 10, 11, and/or 30, and are projected under Condition 30.4.c to be less than or equal to 90 percent of the applicable limit at maximum load; and

(ii) for any source test done after the effective date of this permit, the Permittee identifies in a source test plan under Condition 59

(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 operated under close to identical ambient conditions as the tested turbine;

(3) is the same make and model and has identical injectors and combustor;

(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 any of the emission limits of Conditions 10, 11, and/or 30.

c. **Load.** The Permittee shall comply with the following:

(i) Conduct all tests under Condition 30.4 in accordance with 40 C.F.R. 60.335(b)(2), except as otherwise approved in writing by the Department, or by EPA if the circumstances at the time of the EPA approval are still valid. 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 for any test performed after the effective date of this permit 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 30.4 to predict the highest load at which emissions will comply with the applicable limits in Conditions 10, 11, and/or 30;

(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 any of the applicable limits of Conditions 10, 11, and/or 30.

(C) the Permittee shall comply with a written finding prepared by the Department that

(1) 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 source test done at a higher load, and, if necessary, the accompanying information and demonstration described in Condition 30.4.c(iii)(A); the new limit is subject to any new Department finding under Condition 30.4.c(iii)(C).

(iv) In order to perform an emission test, the Permittee may operate a turbine at a higher load than that prescribed by Condition 30.4.c(iii).

(v) For the purposes of Conditions 30.4 through 30.6, 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.

30.5. **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 30.4.c(iii) does not show compliance with the applicable limits of Conditions 10, 11, and/or 30 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 30.5.a shall be hourly or otherwise as approved by the Department.

(iii) Within one month after submitting a demonstration under Condition 30.4.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 30.4.c(iii)(C), whichever is earlier, the Permittee shall propose to the Department how they will measure load or load surrogates, 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 Conditions 10, 11, and/or 30, that will operate less than 400 hours in any 12 consecutive months, the Permittee shall keep monthly records of the hours of operation.

30.6. **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 68 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 30.4.c(iii):

(i) the load limit;

(ii) the turbine identification; and

(iii) the highest load recorded under Condition 30.5.a during the period covered by the operating report.

b. In each operating report under Condition 68 for each turbine for which Condition 30.4.a, 10.6, or 11.6 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 67 if:

(i) a test result exceeds the emission standard;

(ii) source testing is required under Condition 30.4.a(i) or 30.4.a(ii) but not performed, or

(iii) the turbine was operated at a load exceeding that allowed by Conditions 30.4.c(iii)(B) and 30.4.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]

31. **NSPS Subpart GG Sulfur Standard.** The Permittee shall not allow the sulfur content for the fuel burned in EU IDs 3 through 9 to exceed 0.8 percent by weight.

[18 AAC 50.040(a)(2)(V)]
[40 C.F.R. 60.333(b), Subpart GG]

31.1. **Monitoring**. The Permittee shall monitor compliance with the fuel sulfur content standard listed in this condition, as follows:

[18 AAC 50.040(a)(2)(V)]
[40 C.F.R. 60.334 & 60.335, Subpart GG]

a. Monitor the total sulfur content of the fuel being fired in the turbine, except as provided in Conditions 31.1.b and 31.1.c. The sulfur content of the fuel must be determined using total sulfur methods described in Condition 31.2. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4,000 ppmw), ASTM D4084–82, 94, D5504–01, D6228–98, or Gas Processors Association Standard 2377–86, which measure the major sulfur compounds may be used.

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

b. Notwithstanding the provisions of Conditions 31.1.a and 31.1.c, and upon submittal of a certified statement to the Department that, pursuant to 40 C.F.R. 60.334(h)(3), the gaseous fuel is demonstrated to meet the definition of natural gas in 40 C.F.R. 60.331(u)[13] the Permittee may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine for purposes of compliance with NSPS Subpart GG[14], regardless of whether an existing custom schedule approved by the Administrator requires such monitoring. The Permittee shall use one of the following sources of information to make the required demonstration:

(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

[13] From 40 C.F.R. 60.331(u), *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 ppmw total sulfur, and 338 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 Btu/scf.

[14] Monthly gaseous fuel H_2S content monitoring must be completed to demonstrate compliance with the limit in Condition 17 even if the fuel is determined to meet the definition of natural gas as outlined in Condition 31.1.b.

(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), 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 Permittee may, without submitting a special petition to the Administrator, continue monitoring on this schedule. The EPA-approved Custom Fuel Monitoring Schedule and Alternate H_2S Sampling Method allow the Permittee to determine the sulfur content of the fuel gas at least monthly using ASTM D 4810-88, ASTM D 4913-89, or Gas Producer's Association (GPA) Method 2377-86.

[40 C.F.R. 60.334(h)(4), Subpart GG]
[Custom Fuel Monitoring Schedule, 7/13/93 (with additional correspondence dated 8/20/93, 10/18/93, and 8/19/96)]
[Alternative Monitoring Plan, 10/2/97]

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

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 60.334(i), Subpart GG]

(i) **Gaseous fuel.** If the Permittee elects not to demonstrate sulfur content using options in Condition 31.1.b or Condition 31.1.c, and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded under Condition 31.1.a once per unit operating day.

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

(ii) **Custom schedules.** Notwithstanding the requirements of Condition 31.1.d(i), the Permittee may develop a custom schedule 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, according to the provisions and as allowed under 40 C.F.R. 60.334(i)(3). 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]

31.2. **Test Methods and Procedures.** If the Permittee periodically determines the sulfur content of the fuel combusted in the turbine under Condition 31.1.a and Condition 31.1.d, a minimum of three fuel samples shall be collected during the performance test. Analyze the samples for the total sulfur content of the fuel using:

[18 AAC 50.040(a)(2)(V)]
[40 C.F.R. 60.335(b)(10), Subpart GG]

a. For gaseous fuels, 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 required under Conditions 31.1 and 31.2 may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.

[18 AAC 50.040(j), & 50.326(j)]
[40 C.F.R. 60.335(b)(11), Subpart GG]

31.3. **Recordkeeping.** Keep records of analyses conducted under Conditions 31.1 and 31.2.

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

31.4. **Reporting.** The Permittee shall:

a. for each affected unit for which the Permittee elects to periodically determine the fuel sulfur content under Condition 31.1.a, 31.1.c, or 31.1.d,

(i) annually report the results of all sulfur monitoring to EPA and send a copy to the Department by the 30th day following the end of each calendar year;

[EPA Letter, Re: Custom Fuel Monitoring Schedule, 10/18/93]

(ii) include with the report submitted under Condition 31.4.a(i) a report of excess emissions and monitoring system downtime in accordance with 40 C.F.R. 60.7(c) as summarized in Condition 23 and as defined under 40 C.F.R. 60.334(j)(2). Excess emissions shall be reported for all periods of unit operation, including startups, shutdowns, and malfunctions.

(iii) If periodic gaseous fuel sulfur monitoring is not required to be conducted because the demonstration under Condition 31.1.b has been made, reporting under Conditions 23, 24, and this condition is not required.

b. include a copy of the records required by Condition 31.3 with the operating report required by Condition 68 for the period covered by the report; and

c. report under Condition 67 if

(i) a test result exceeds the limit in Condition 31;

(ii) monitoring is required under Condition 31.1 but not performed; or

(iii) any reporting required under Condition 31.4 is not completed.

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 60.334(j)(2) & (5), Subpart GG]

Emission Units/Stationary Sources Subject to Federal NESHAPs

Existing Stationary Reciprocating Internal Combustion Engines (RICE) Subject to NESHAPs Subparts A and ZZZZ

EU IDs 15 through 17 and 23 through 27

32. **NESHAP Subpart ZZZZ Compliance Deadline.** For EU IDs 15 through 17 and 23 through 27, the Permittee shall comply with the applicable requirements of Conditions 33 through 36 beginning no later than May 3, 2013.

[18 AAC 50.040(c)(23) & (j) & 50.326(j)]
[40 C.F.R. 71.6(a)(1)]
[40 C.F.R. 63.6595(a)(1), Subpart ZZZZ]

National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart A

33. **NESHAP Subpart A Requirements.** The Permittee shall comply with the applicable requirements of 40 C.F.R. 63 Subpart A, for EU IDs 15 through 17 and 23 through 27, in accordance with the provisions for applicability of Subpart A in Table 8 to Subpart ZZZZ.

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

RICE Engines Subject to NESHAP, Subpart ZZZZ

34. **NESHAP Subpart ZZZZ Requirements.** For EU IDs 15 through 17 and 23 through 27, listed in Table A, the Permittee shall comply with the following requirements:

NESHAP Subpart ZZZZ General Monitoring, Operation, and Maintenance Requirements

34.1. **Good Air Pollution Control Practices.** At all times, operate and maintain EU IDs 15 through 17 and 23 through 27, 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 15 through 17 and 23 through 27. The Permittee shall comply with either:

a. the manufacturer's emission-related written operation and maintenance instructions; 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. 63.6605(b), 63.6625(e), & Table 6 (Item 9) of Subpart ZZZZ]

34.2. **Startup and Idle Time.** For EU IDs 15 through 17 and 23 through 27, minimize the time spent at idle during startup and minimize the startup time to a period needed for appropriate and safe loading, not to exceed 30 minutes.

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

34.3. **Operating Time Limits.** To be classified as an emergency stationary engine, EU IDs 15, 16, and 23 through 27 must be operated according to the requirements of Conditions 34.3.a through 34.3.d. Otherwise, the engine will not be considered an emergency engine under Subpart ZZZZ and will need to meet all Subpart ZZZZ requirements for non-emergency engines.

a. Any operation of EU IDs 15, 16, and 23 through 27 for purposes other than emergency operation, maintenance and testing as described in Condition 34.3.c, and operation in non-emergency situations as allowed in Condition 34.3.d, is prohibited.

b. There is no time limit on the use of EU IDs 15, 16, and 23 through 27 in emergency situations under this condition.

c. EU IDs 15, 16, and 23 through 27 may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of these units is limited to 100 hours per calendar year per 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 RICE beyond 100 hours per calendar year.

d. Each of EU IDs 15 and 16 may be operated up to 50 hours per calendar year in non-emergency situations, but those hours shall be counted towards the 100 hours per calendar year provided for maintenance and testing under Condition 34.3.c[15]. The 50 hours per calendar year under non-emergency situations cannot be used for peak shaving or to generate income for a stationary source to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

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

34.4. Monitor the operating time of EU IDs 15, 16, and 23 through 27 using a non-resettable hour meter.

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

[15] Although Subpart ZZZZ allows affected emergency engines to operate up to 50 hours per calendar year for non-emergency situations other than maintenance and testing, the Permittee has requested to limit non-emergency operation of EU IDs 23 through 27 to maintenance and testing only, making the operating limit for these units more restrictive than the operations allowed under Subpart ZZZZ. Condition 16 outlines the requested restriction and associated monitoring, recordkeeping, and reporting.

NESHAP Subpart ZZZZ Emissions Management Practices

34.5. For EU IDs 15, 16, and 23 through 27, existing emergency stationary CI RICE located at an area source of HAP emissions, comply with the following, except as allowed by Condition 34.6:

a. Change the oil and filter every 500 hours of operation or annually, whichever comes first[16];

b. Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first; and

c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

[40 C.F.R. 63.6603(a) & Table 2d (Item 4) of Subpart ZZZZ]

34.6. If any of EU IDs 15, 16, and/or 23 through 27 is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required under Condition 34.5, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice required under Condition 34.5 should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated.

[40 C.F.R. 63, Footnote 2 to Table 2d of Subpart ZZZZ]

34.7. For EU ID 17, an existing non-emergency non-black start stationary CI RICE ≤300 hp located at an area source of HAP emissions, comply with the following:

a. Change the oil and filter every 1,000 hours of operation or annually, whichever comes first[17];

b. Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first; and

c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

[40 C.F.R. 63.6603(a) & Table 2d (Item 1) of Subpart ZZZZ]

NESHAP Subpart ZZZZ Reporting

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

[16] The Permittee may use an oil analysis program as described in 40 C.F.R. 63.6625(i) to extend the specified oil change requirement in Condition 34.5.a.[ref. 40 C.F.R. 63, Subpart ZZZZ, Table 2d, footnote 1]

[17] The Permittee may use an oil analysis program as described in 40 C.F.R. 63.6625(i) to extend the specified oil change requirement in Condition 34.7.a.[ref. 40 C.F.R. 63, Subpart ZZZZ, Table 2d, footnote 1]

35.1. For EU IDs 15, 16, and/or 23 through 27, include in the operating report required by Condition 68 a notification of any failure to perform the management practice on the schedule required by Condition 34.5 as a result of operating under the emergency exception allowed by Condition 34.6. Include in the report the emergency and/or the Federal, State or local law under which the risk of performing the management practice on the required schedule was deemed unacceptable.

[40 C.F.R. 63, Footnote 2 to Table 2d of Subpart ZZZZ]

35.2. Include in the operating report required by Condition 68 a report of Subpart ZZZZ 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 of Subpart ZZZZ) was not met.

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

35.3. Notify the Department per Condition 67 if any of the requirements in Conditions 32 through 36 were not met.

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

NESHAP Subpart ZZZZ Recordkeeping

36. **Recordkeeping.** For each of EU IDs 15 through 17 and 23 through 27, keep the following records:

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

36.1. Records of maintenance conducted on each of EU IDs 15 through 17 and 23 through 27 to demonstrate that the engine and after-treatment control device (if any) are operated and maintained according to the Permittee's own maintenance plan, if maintenance is performed as allowed under Condition 34.1.b. These records must include, at a minimum: oil and filter change dates and corresponding hour on the hour meter; inspection and replacement dates for air cleaners, hoses, and belts; and records of other emission-related repairs and maintenance performed.

[40 C.F.R. 63.6655(e), 75 FR 9654, Subpart ZZZZ]

36.2. Records of the hours of operation for each of EU IDs 15, 16, and 23 through 27, including:

a. the calendar year total number of hours spent for emergency operation and a description of what classified the operation as an emergency; and

b. the calendar year total number of hours spent for non-emergency operation.

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

36.3. Keep records in a form suitable and readily available for expeditious inspection and review, readily accessible in hard copy or electronic form, for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record pertaining to 40 C.F.R Part 63 applicable requirements. All records may be retained off site.

[40 C.F.R. 63.6660, 63.6665 & Table 8, Subpart ZZZZ]
[40 C.F.R. 63.10(b)(1), Subpart A]

General Federal Requirements

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

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

38. **Protection of Stratospheric Ozone, 40 C.F.R. 82**

Subpart F – Recycling and Emissions Reduction

38.1. **Refrigerant Recycling and Disposal.** 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. Applicable requirements include 40 C.F.R. 82.154, 82.156, 82.161, 82.162, and 82.166.

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

Subpart G – Significant New Alternatives Policy (Halon)

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

[18 AAC 50.040(d)]
[40 C.F.R. 82, Subpart G, 82.174 (b) - (d)]

Subpart H – Halon Emissions Reduction

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

[18 AAC 50.040(d)]
[40 C.F.R. 82, Subpart H, 82.270 (b) - (f)]

NESHAPs Applicability Determinations

39. The Permittee shall determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 C.F.R. 63) in accordance with the procedures described in 40 C.F.R. 63.1(b). If a source becomes affected by an applicable subpart of 40 C.F.R. 63, the Permittee 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).

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

Section 5. General Conditions

Standard Terms and Conditions

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

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

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

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

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

[18 AAC 50.326(j)(3), 50.345(a) & (g)]

43. **Administration Fees.** The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-405.

[18 AAC 50.326(j)(1), 50.400, 50.403, & 50.405]
[AS 37.10.052(b), 11/04; AS 46.14.240, 8/1/07]

44. **Assessable Emissions.** 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 assessable emission fee rate is set out in 18 AAC 50.410(b). The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of

    44.1. the stationary source's assessable potential to emit of 5,957 TPY; or

    44.2. the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon actual annual emissions emitted during the most recent calendar year or another 12-month period approved in writing by the Department, when demonstrated by

        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.

[18 AAC 50.040(j)(3), 50.035, 50.326(j)(1), 50.346(b)(1), 50.410, & 50.420]
[40 C.F.R. 71.5(c)(3)(ii)]

45. **Assessable Emission Estimates.** Emission fees will be assessed as follows:

45.1. no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Suite 303, Juneau, AK 99801-1795; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or

45.2. if no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in Condition 44.1.

[18 AAC 50.040(j)(3), 50.326(j)(1), 50.346(b)(1), 50.410, & 50.420]
[40 C.F.R. 71.5(c)(3)(ii)]

46. **Good Air Pollution Control Practice.** The Permittee shall do the following for EU IDs 1, 2, 10 through 14 and 18 through 20:

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

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

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

[18 AAC 50.030, 50.326(j)(3), & 50.346(b)(5)]

47. **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)]

48. **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. Monitoring shall consist of an annual certification that reasonable precautions were taken.

[18 AAC 50.045(d), 50.040(e), & 50. 326(j)(3)]

49. **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. Monitoring shall consist of an annual certification that the Permittee does not conduct stack injection at the stationary source.

[18 AAC 50.055(g)]

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

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

Monitoring, Recordkeeping, and Reporting for Condition 50:

50.1. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 67.

50.2. 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 50.

50.3. The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if

a. after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 50; or

b. the Department notifies the Permittee that it has found a violation of Condition 50.

50.4. **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 50; and

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

50.5. **Reporting.** With each operating report required under Condition 68, and for the period covered by the report, the Permittee shall include a brief summary report which must include:

a. the number of complaints received;

b. the number of times the Permittee or the Department found corrective action necessary;

c. the number of times action was taken on a complaint within 24 hours; and

d. the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.

50.6. 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.

51. **Technology-Based Emission Standard.** If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235(d), causes emissions in excess of a technology-based emission standard[18] listed in Conditions 10, 11, 29, 30, and 31, the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard. Excess emissions reporting under Condition 67 requires information on the steps taken to minimize emissions. Monitoring of compliance for this condition consists of the report required under Condition 67.

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

Open Burning Requirements

52. **Open Burning.** If the Permittee conducts open burning at this stationary source, the Permittee shall comply with the requirements of 18 AAC 50.065.

52.1. The Permittee shall keep written records to demonstrate that the Permittee complies with the limitations in this condition and the requirements of 18 AAC 50.065. Upon request by the Department, submit copies of the records.

52.2. Compliance with this condition shall be an annual certification conducted under Condition 69.

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

[18] *Technology-based emission standard* means a best available control technology standard (BACT); a lowest achievable emission rate standard (LAER); a maximum achievable control technology 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. Such other standards might include those found in 40 C.F.R. 82, Protection of Stratospheric Ozone.

Section 6. General Source Testing and Monitoring Requirements

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

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

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

[18 AAC 50.220(b)]

54.1. at a point or points that characterize the actual discharge into the ambient air; and

54.2. at the maximum rated burning or operating capacity of the emission unit or another rate determined by the Department to characterize the actual discharge into the ambient air.

55. **Reference Test Methods.** The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:

55.1. Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60.

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

55.2. Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 61.

[18 AAC 50.040(b) & 50.220(c)(1)(B)]
[40 C.F.R. 61]

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

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

55.4. 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 & 50.220(c)(1)(D)]

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

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

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

[18 AAC 50.035(b)(2) & 50.220(c)(1)(F)]
[40 C.F.R. 51, Appendix M]

55.7. 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) & 50.220(c)(2)]
[40 C.F.R. 63, Appendix A, Method 301]

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

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

57. **Test Exemption.** The Permittee is not required to comply with Conditions 59, 60 and 61 when the exhaust is observed for visible emissions using the Method 9 Plan (Condition 2.1).

[18 AAC 50.345(a)]

58. **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)]

59. **Test Plans.** Except as provided in Condition 57, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the emission unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under Condition 53 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)]

60. **Test Notification.** Except as provided in Condition 57, 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)]

61. **Test Reports.** Except as provided in Condition 57, within 60 days after completing a source test, the Permittee shall submit two copies of the results in the format set out in the *Source Test Report Outline,* adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in Condition 64. 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)]

62. **Particulate Matter Calculations.** In source testing for compliance with the particulate matter standards in Conditions 6 and 20.2, 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

63. **Recordkeeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:

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

63.1. Copies of all reports and certifications submitted pursuant to this section of the permit; and

63.2. Records of all monitoring required by this permit, and information about the monitoring including:

a. the date, place, and time of sampling or measurements;

b. the date(s) analyses were performed;

c. the company or entity that performed the analyses;

d. the analytical techniques or methods used;

e. the results of such analyses; and

f. the operating conditions as existing at the time of sampling or measurement.

Reporting Requirements

64. **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.

64.1. The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if

a. a certifying authority registered under AS 09.25.510 verifies that the electronic signature is authentic; and

b. the person providing the electronic signature has made an agreement, with the certifying authority described in Condition 64.1.a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.

[18 AAC 50.345(a) & (j), 50.205, & 50.326(j)]
[40 C.F.R. 71.6(a)(3)(iii)(A)]

65. **Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall send an original and one copy of reports, compliance certifications, and other submittals required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. The Permittee may, upon consultation with the Compliance Technician regarding software compatibility, provide electronic copies of data reports, source test reports, or other records under a cover letter certified in accordance with Condition 64.

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

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

[18 AAC 50.345(a) & (i), 50.200, & 50.326(a) & (j)]
[40 C.F.R. 71.5(a)(2) & 71.6(a)(3)]

67. **Excess Emissions and Permit Deviation Reports**

67.1. Except as provided in Condition 50, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

a. in accordance with 18 AAC 50.240(c), as soon as possible after the event commenced or is discovered, report

(i) emissions that present a potential threat to human health or safety; and

(ii) excess emissions that the Permittee believes to be unavoidable;

b. in accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology based emission standard;

c. report all other excess emissions and permit deviations

(i) within 30 days after the end of the month during which the excess emissions or other permit deviation occurred, except as provided in Conditions 67.1.c(ii) and 67.1.c(iii); or

(ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 67.1.c(i); or

(iii) according to the required deadline for failure to monitor, as specified in Conditions 4.2.b and 8.1.b.

67.2. When reporting either excess emissions or permit deviations, the Permittee shall report using either the Department's on-line form, which can be found at http://www.dec.state.ak.us/air/ap/site.htm or https://myalaska.state.ak.us/dec/air/airtoolsweb/, or if the Permittee prefers, the form contained in Section 13 of this permit. The Permittee must provide all information called for by the form that is used.

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

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

68. **Operating Reports.** During the life of this permit[19], the Permittee shall submit to the Department an original and one copy of an operating report by May 15 for the period January 1 to March 31, by August 15 for the period April 1 to June 30, by November 15 for the period July 1 to September 30, and by February 15 for the period October 1 to December 31 of the previous year.

68.1. 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.

68.2. When excess emissions or permit deviations that occurred during the reporting period are not reported with the operating report under Condition 68.1, the Permittee shall identify:

a. the date of the deviation;

b. the equipment involved;

c. the permit condition affected;

d. a description of the excess emissions or permit deviation; and

e. any corrective action or preventive measures taken and the date(s) of such actions.

68.3. When excess emissions or permit deviations have already been reported under Condition 67 the Permittee shall cite the date or dates of those reports.

68.4. The operating report must include, for the period covered by the report, a listing of emissions monitored under Conditions 2.1.e, 7.2, and 30.4.a 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

[19] *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.

d. the monitoring result which triggered the additional monitoring.

68.5. **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)]

69. **Annual Compliance Certification.** Each year by March 31, the Permittee shall compile and submit to the Department an original and one copy of an annual compliance certification report[20].

69.1. 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.

69.2. **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.

69.3. In addition, submit a copy of the report directly to the EPA-Region 10, Office of Air Quality, M/S OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101.

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

70. **NSPS and NESHAP Reports**. The Permittee shall:

70.1. **Reports:** Attach to the operating report required by Condition 68, 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; and

70.2. **Waivers**: Upon request by the Department, provide a written copy of any EPA-granted alternative monitoring requirement, custom monitoring schedule or waiver of the Federal emission standards, recordkeeping, monitoring, performance testing, or reporting requirements. The Permittee shall keep a copy of each U.S. EPA issued monitoring waiver or custom monitoring schedule with the permit.

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

[20] See Conditions 69.2 and 69.3 for clarification on the number of reports required.

71. **Emission Inventory Reporting.** The Permittee shall submit to the Department reports of actual emissions, by emission unit[21], of CO, NH_3, NO_X, PM_{10}, $PM_{2.5}$, SO_2, VOCs and lead (Pb) (and lead compounds) for the previous calendar year using the form in Section 15 of this permit, each year by March 31, as the stationary source's potential emissions exceeds 2500 TPY of NO_X.

a. Include in the report required by this condition, the required data elements contained within the form in Section 15 or those contained in Table 2A of Appendix A to Subpart A of 40 C.F.R. 51 (final rule published in 73 FR 76556 (December 17, 2008)) for each stack associated with an emission unit.

[18 AAC 50.346(b)(8) & 50.200]
[40 C.F.R. 51.15, 51.30(a)(1) & (b)(1)
and 40 C.F.R. 51, Appendix A to Subpart A, 73 FR 76556 (12/17/08)]

[21] Emissions from non-road engines are not required to be included in the emission inventory reports.

Section 8. Permit Changes and Renewal

72. **Permit Applications and Submittals.** The Permittee shall comply with the following requirements for submitting application information to the EPA Region 10:

72.1. 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[22];

72.2. The information shall be submitted to the same address as in Condition 69.3.

72.3. 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

72.4. The Permittee shall maintain records as necessary to demonstrate compliance with this condition.

[18 AAC 50.040(j)(7), 50.326(b), & 50.346(b)(7)]
[40 C.F.R. 71.10(d)(1)]

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

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

74. **Off Permit Changes.** The Permittee may make changes that are not addressed or prohibited by this permit other than those subject to the requirements of 40 C.F.R. Parts 72 through 78 or those that are modifications under any provision of Title I of the Act to be made without a permit revision, provided that the following requirements are met:

74.1. Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition;

74.2. 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;

74.3. The change shall not qualify for the shield under 40 C.F.R. 71.6(f);

[22] The documents required in Condition 72.1 are submitted to the Department's Anchorage office. The current address for the Anchorage office is: ADEC, 619 East Ship Creek Avenue, Suite 249, Anchorage, AK 99501.

74.4. 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) & 50.326(j)]
[40 C.F.R. 71.6(a)(12)]

75. **Operational Flexibility.** The Permittee may make changes within the permitted stationary source under Section 502(b)(10) of the Act 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):

75.1. The Permittee shall provide EPA and the Department with a written notification no less than 7 days in advance of the proposed change.

75.2. For each such change, the written notification required by Condition 75.1 shall include a brief description of the change within the permitted stationary source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change.

75.3. The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to Condition 75.

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

76. **Permit Renewal.** To renew this permit, the Permittee shall submit an application under 18 AAC 50.326 no sooner than [18 months before] 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), 50.326(c)(2) & (j)(2)]
[40 C.F.R. 71.5(a)(1)(iii) & 71.7(b) & (c)(1)(ii)]

Section 9. Compliance Requirements

General Compliance Requirements

77. Compliance with permit terms and conditions is considered to be compliance with those requirements that are

    77.1. included and specifically identified in the permit; or

    77.2. determined in writing in the permit to be inapplicable.

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

78. The Permittee must comply with each permit term and condition.

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

    78.2. 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

        a. an enforcement action;

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

        c. denial of an operating permit renewal application.

[18 AAC 50.040(j), 50.326(j), & 50.345(a) & (c)]
[40 C.F.R. 71.6(c)(3) & 71.5(c)(8)(iii)(A)]

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

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

80. 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

    80.1. enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;

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

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

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

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

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

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

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.

82. Nothing in this permit shall alter or affect the following:

82.1. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section; or

82.2. 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)]

83. Table D identifies the emission units that are not subject to the specified requirements at the time of permit issuance. The permit shields apply to the equipment as currently permitted. **Any modification or reconstruction of the equipment will negate the permit shield. Equipment replacement may negate the permit shield depending on whether that replacement affects emission standard applicability.** If any of the requirements listed in Table D become applicable during the permit term, the Permittee shall comply with such requirements on a timely basis. The Permittee shall also provide appropriate notification and apply for a construction permit and/or an operating permit modification and/or permit amendment, as necessary.

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

Table D - Permit Shields Granted

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
All Gas-Fired Heaters	40 C.F.R. 60, Subpart D - Standards of Performance for Fossil-Fuel-Fired Steam Generators	Heat input capacities below threshold (250 MMBtu/hr); and units not classified as *Fossil-Fuel-Fired Steam Generating Units*, as defined in subpart.
	40 C.F.R. 60, Subpart Da - Standards of Performance for Electric Utility Steam Generating Units	Heat input capacities below threshold (250 MMBtu/hr); and units not classified as *Electric Utility Steam Generating Units*, as defined in subpart.
	40 C.F.R. 63, Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources	The emission units at this stationary source, including insignificant activities, either: 1) are not "boilers" as defined in 40 C.F.R. 63.11237; or 2) are "temporary boilers" or "hot water heaters" as defined in 40 C.F.R. 63.11237. Units that fit these classifications are exempt from this rule per 40 C.F.R. 63.11195(f) & (h).

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	40 C.F.R. 60, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	Heat input capacities below threshold (100 MMBtu/hr) and/or commenced construction prior to effective date of subpart (6/19/84).
Gas–Fired Heaters NGH-14-2801 and NGH-14-2811	40 C.F.R. 60, Subpart Dc – Standards of Performance for Small Industrial – Commercial – Institutional Steam Generating Units	Heat input capacities below threshold (10 MMBtu/hr) and/or commenced construction prior to effective date of subpart (6/9/89).
Gas-Fired Heaters NGH-14-1431, NGH-14-1481, and NGH-14-1491	40 C.F.R. 60, Subpart Dc	Commenced construction prior to effective date of subpart (6/9/89).
All Gas-Fired Heaters	40 C.F.R. 63, Subpart DDDDD – National Emissions Standards for Hazardous Air Pollutants for Industrial/Commercial/ Institutional Boilers and Process Heaters	Flow Station #3 is not a major source of HAPs.
All Reciprocating IC Engines	40 C.F.R. 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Each IC engine was manufactured prior to the April 1, 2006 applicability date of the rule (see 40 C.F.R. 60.4200(a)(2)(i)) and has not been modified or reconstructed after July 11, 2005 (see 40 C.F.R. 60.4200(a)(3)).
Existing Engines - EU ID(s) 15 – 17 and 23 – 27 (EDG-14-2882, EDG-14-2882-01, EDG-14-1599, 80-805, 80-807, 80-854, 80-872, 80-875)	40 C.F.R. 63.6600, §63.6601, and §63.6602, Subpart ZZZZ - Emission Limitations	The stationary source is not a major source of HAP emissions.
	40 C.F.R. 63.6610 and §63.6611, Subpart ZZZZ – Testing and Initial Compliance Requirements	The stationary source is not a major source of HAP emissions.
	40 C.F.R. 63.6650(g), Subpart ZZZZ – Reporting Requirements	Reporting requirement only applies to "new" or reconstructed stationary RICE which fire landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.
	40 C.F.R. 63.6655(a) – (d), Subpart ZZZZ - Recordkeeping Requirements	There are no emissions or operating limits which apply to these engines. Additionally, the engines do not fire landfill or digester gas and a CEMS or CPMS is not required.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
Existing Non-Emergency Engine (≤300Hp) - EU ID 17 (EDG-14-1599)	40 C.F.R. 63.6625(f), Subpart ZZZZ – Monitoring, Installation, Collection, Operation and Maintenance Requirements	This engine is not classified as an emergency engine under Subpart ZZZZ.
	40 C.F.R. 63.6640(f), Subpart ZZZZ – Continuous Compliance Demonstration	This engine is not classified as an emergency engine under Subpart ZZZZ.
	40 C.F.R. 63.6655(f), Subpart ZZZZ - Recordkeeping Requirements	This engine is not classified as an emergency engine under Subpart ZZZZ and is not required to limit hours of operation per 40 C.F.R. 63.6640(f).
Existing Emergency Engines - EU ID(s) 15, 16, and 23 – 27 (EDG-14-2882, EDG-14-2882-01, 80-805, 80-807, 80-854, 80-872, 80-875) Existing Non-Emergency Engine (≤300Hp) - EU ID 17 (EDG-14-1599)	40 C.F.R. 63, Subpart ZZZZ, Table 2b - Operating Limitations	There are no requirements in Table 2b of Subpart ZZZZ that apply to these engines because they are emergency engines and/or rated ≤500 bhp. This shield applies only for as long as the engine(s) rated >500 bhp meet the definition of "emergency RICE" in 40 C.F.R. 63.6675" and the requirements in 40 C.F.R. 63.6640(f). This shield does not apply when the engine(s) rated >500 bhp no longer qualify as "emergency" and would be subject to the applicable provisions for "nonemergency" as provided in NESHAP Subpart ZZZZ.
	40 C.F.R. 63.6604, Subpart ZZZZ - Fuel Requirements	The requirement to comply with 40 C.F.R. 80.510(b) does not apply to existing emergency engines or non-emergency engines with a site rating of ≤300 bhp. This shield applies only for as long as the engine(s) rated >300 bhp meet the definition of "emergency RICE" in 40 C.F.R. 63.6675" and the requirements in 40 C.F.R. 63.6640(f). This shield does not apply when the engine(s) rated >300 bhp no longer qualify as "emergency" and would be subject to the applicable provisions for "nonemergency" as provided in NESHAP Subpart ZZZZ.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
		Existing emergency engines and non-emergency engines with a site rating of ≤300 bhp are not subject to any emissions limitations or operating limitations under Subpart ZZZZ. This shield applies only for as long as the engine(s) rated >300 bhp meet the definition of "emergency RICE" in 40 C.F.R. 63.6675" and the requirements in 40 C.F.R. 63.6640(f). This shield does not apply when the engine(s) rated >300 bhp no longer qualify as "emergency" and would be subject to the applicable provisions for "nonemergency" as provided in NESHAP Subpart ZZZZ.
	40 C.F.R. 63.6612, Subpart ZZZZ – Testing and Initial Compliance Requirements	There are no requirements in either Table 4 or Table 5 of Subpart ZZZZ that apply to these engines because there are no applicable emission limitations per 40 C.F.R. 63.6610, §63.6611 and Table 2d of Subpart ZZZZ. This shield applies only for as long as the engine(s) rated >300 bhp meet the definition of "emergency RICE" in 40 C.F.R. 63.6675" and the requirements in 40 C.F.R. 63.6640(f). This shield does not apply when the engine(s) rated >300 bhp no longer qualify as "emergency" and would be subject to the applicable provisions for "nonemergency" as provided in NESHAP Subpart ZZZZ.
	40 C.F.R. 63.6615, Subpart ZZZZ – Subsequent Testing 40 C.F.R. 63.6620, Subpart ZZZZ – Performance Tests and Procedures	There are no performance testing requirements that apply to these engines because there are no applicable emission limitations per 40 C.F.R. 63.6610, §63.6611 and Table 2d of Subpart ZZZZ. This shield applies only for as long as the engine(s) rated >300 bhp meet the definition of "emergency RICE" in 40 C.F.R. 63.6675" and the requirements in 40 C.F.R. 63.6640(f). This shield does not apply when the engine(s) rated >300 bhp no longer qualify as "emergency" and would be subject to the applicable provisions for "nonemergency" as provided in NESHAP Subpart ZZZZ.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	40 C.F.R. 63.6625(g), Subpart ZZZZ – Monitoring, Installation, Collection, Operation and Maintenance Requirements	This requirement does not apply to emergency engines or non-emergency engines with a site rating of ≤300 bhp. This shield applies only for as long as the engine(s) rated >300 bhp meet the definition of "emergency RICE" in 40 C.F.R. 63.6675" and the requirements in 40 C.F.R. 63.6640(f). This shield does not apply when the engine(s) rated >300 bhp no longer qualify as "emergency" and would be subject to the applicable provisions for "nonemergency" as provided in NESHAP Subpart ZZZZ.
	40 C.F.R. 63.6630, Subpart ZZZZ – Initial Compliance Demonstration	There are no performance testing requirements that apply to these engines because there are no applicable emission limitations per 40 C.F.R. 63.6610, §63.6611 and Table 2d of Subpart ZZZZ. This shield applies only for as long as the engine(s) rated >300 bhp meet the definition of "emergency RICE" in 40 C.F.R. 63.6675" and the requirements in 40 C.F.R. 63.6640(f). This shield does not apply when the engine(s) rated >300 bhp no longer qualify as "emergency" and would be subject to the applicable provisions for "nonemergency" as provided in NESHAP Subpart ZZZZ.
	40 C.F.R. 63.6635, Subpart ZZZZ – Monitoring to Demonstrate Continuous Compliance	These requirements apply only to CI RICE subject to emissions or operational limits. There are no emissions or operational limits that apply to these engines. This shield applies only for as long as the engine(s) rated >300 bhp meet the definition of "emergency RICE" in 40 C.F.R. 63.6675" and the requirements in 40 C.F.R. 63.6640(f). This shield does not apply when the engine(s) rated >300 bhp no longer qualify as "emergency" and would be subject to the applicable provisions for "nonemergency" as provided in NESHAP Subpart ZZZZ.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	40 C.F.R. 63.6645, Subpart ZZZZ - Notification Requirements 40 C.F.R. 63.9, Subpart A – Notification Requirements	Per 40 C.F.R. 63.6645(a)(5), initial notification is not required for existing stationary emergency CI RICE or an existing stationary CI RICE that is not subject to any numerical emission standards. This shield applies only for as long as the engine(s) rated >300 bhp meet the definition of "emergency RICE" in 40 C.F.R. 63.6675" and the requirements in 40 C.F.R. 63.6640(f). This shield does not apply when the engine(s) rated >300 bhp no longer qualify as "emergency" and would be subject to the applicable provisions for "nonemergency" as provided in NESHAP Subpart ZZZZ.
	40 C.F.R. 63.6640(a) & (b) and §63.6650(a) - (e), Subpart ZZZZ – Reporting Requirements 40 C.F.R. 63.9, Subpart A – Notification Requirements	Compliance status reporting requirements only apply to CI RICE subject to numerical emissions or operational limits. There are no emissions or operational limits that apply to these engines. This shield applies only for as long as the engine(s) rated >300 bhp meet the definition of "emergency RICE" in 40 C.F.R. 63.6675" and the requirements in 40 C.F.R. 63.6640(f). This shield does not apply when the engine(s) rated >300 bhp no longer qualify as "emergency" and would be subject to the applicable provisions for "nonemergency" as provided in NESHAP Subpart ZZZZ.
	40 C.F.R. 63.7, Subpart A – Performance Testing Requirements	There are no performance testing requirements that apply to these engines. This shield applies only for as long as the engine(s) rated >300 bhp meet the definition of "emergency RICE" in 40 C.F.R. 63.6675" and the requirements in 40 C.F.R. 63.6640(f). This shield does not apply when the engine(s) rated >300 bhp no longer qualify as "emergency" and would be subject to the applicable provisions for "nonemergency" as provided in NESHAP Subpart ZZZZ.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	40 C.F.R. 63.8, Subpart A – Monitoring	Per 40 C.F.R. 63.6645(a)(5), these engines are not subject to the requirements of §63.8(e), (f)(4) and (f)(6). This shield applies only for as long as the engine(s) rated >300 bhp meet the definition of "emergency RICE" in 40 C.F.R. 63.6675" and the requirements in 40 C.F.R. 63.6640(f). This shield does not apply when the engine(s) rated >300 bhp no longer qualify as "emergency" and would be subject to the applicable provisions for "nonemergency" as provided in NESHAP Subpart ZZZZ.
Storage Tanks 14-1273, 14-1931, 14-1932, 14-1933, 14-1934, 14-1935, 14-1938, 14-1951, 14-1962, 14-1984, 37-1902, and 37-1902-1	40 C.F.R. 60, Subpart K - Standards of Performance for Storage Vessels for Petroleum Liquids	Vessel not storing a petroleum liquid, as defined in subpart; and/or vessel storage capacity below threshold (40,000 gallons); and/or vapor pressure of stored liquid below thresholds; and/or storage prior to custody transfer; and/or commenced construction after the effective date of subpart (5/19/78), and/or vessel is designed to operate as a pressure vessel, depending upon tank.
Storage Tanks 14-1273, 14-1931, 14-1932, 14-1933, 14-1934, 14-1935, 14-1938, 14-1962, 14-1984, 37-1902, and 37-1902-1	40 C.F.R. 60, Subpart Ka – Standards of Performance for Storage Vessels of Petroleum Liquids	Vessel not storing a petroleum liquid, as defined in subpart; and/or vessel storage capacity below thresholds (40,000/420,000 gallons); and/or vapor pressure of stored liquid below thresholds; and/or storage prior to custody transfer; and/or commenced construction prior to or after the effective dates of subpart (5/18/78-7/23/84), and/or vessel is designed to operate as a pressure vessel, depending upon tank.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
Storage Tank: 14-1951	40 C.F.R. 60, Subpart A – General Provisions §60.7(a)(1) & (3) – Notification and Recordkeeping (Initial Notification)	Obsolete requirements – completed as required.
	§60.7(a)(4) - Notification and Recordkeeping	This requirement only applies to "existing facilities," as defined in 40 C.F.R. 60.2.
	§60.7(c) & (d) – Excess Emissions Reporting for 40 C.F.R. 60, Subpart Ka	The provisions of §60.7(c) & (d) apply only to a NSPS which require the installation of a continuous monitoring system (CMS) or monitoring device, as defined in §60.2; BPXA is not required to install a CMS or monitoring device per NSPS Subpart Ka.
	§60.8 – Performance Tests for 40 C.F.R. 60, Subpart Ka	For NSPS Subpart Ka, there are no performance test requirements for closed vent systems.
	§60.18 – General Control Device Requirements for 40 C.F.R. 60, Subpart Ka	40 C.F.R. 60.18 only applies to "facilities covered by subparts referring to this section"[ref. §60.18(a)]; Subpart Ka does not reference §60.18.
	40 C.F.R. 60, Subpart Ka - Standards of Performance for Storage Vessels of Petroleum Liquids §60.113a(a)(2)(iii) – Testing and Procedures	Obsolete requirement – completed as required. BPXA submitted an O&M plan to EPA for Tank tag no. 14-1951 on March 12, 2003.
	40 C.F.R. 60, Subpart Ka §60.115a – Monitoring of Operations	Storage vessels equipped with a vapor recovery return or disposal system in accordance with the requirements of §60.112a(a)(3) are exempt from §60.115 – Monitoring of Operations [ref. §60.115a(d)(2)].
	40 C.F.R. 64 – Compliance Assurance Monitoring	The CAM rule defines "control device" to include only add-on controls and excludes "inherent process equipment." The closed vent system for this tank is "inherent process equipment" which was installed and is operated primarily for material recovery and safety reasons, not for compliance with air quality regulations.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
Storage Tank: 14-1962	40 C.F.R. 60, Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)	In a letter to BPXA dated August 11, 2005, EPA determined that this tank meets the definition of a process tank in §60.111b (as amended 10/15/03). Therefore, this vessel is exempt from NSPS Subpart Kb.
	40 C.F.R. 64 – Compliance Assurance Monitoring	The CAM rule defines "control device" to include only add-on controls and excludes "inherent process equipment." The closed vent system for this tank is "inherent process equipment" which was installed and is operated primarily for material recovery and safety reasons, not for compliance with air quality regulations.
Storage Tanks 14-1273, 14-1931, 14-1932, 14-1933, 14-1934, 14-1935, 14-1938, 14-1951, 14-1984, 37-1902, and 37-1902-1	40 C.F.R. 60, Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels)	Vessel not storing a petroleum liquid, as defined in subpart; and/or vessel storage capacity below thresholds; and/or vapor pressure of stored liquid below thresholds; and/or the petroleum or condensate stored was processed or treated prior to custody transfer; and/or commenced construction prior to or after the effective date of subpart (7/23/84); and/or vessel is designed to operate as a pressure vessel, depending upon tank.
Gas-Fired Turbines NGT-14-1801 and NGT-14-1802	40 C.F.R. 60, Subpart GG – Standards of Performance for Stationary Gas Turbines	Commenced construction prior to effective date of subpart (10/3/77). No "modification" occurred as a result of Circamet Can replacement of these turbines; source testing inconclusive regarding an increase in emission rates.
Gas-Fired Turbines NGT-14-15105 and NGT-14-15106	40 C.F.R. 60, Subpart GG §60.332 - Standards for NO_X 40 C.F.R. 60, Subpart A - General Provisions §60.8(a) – Performance Tests (NO_X)	Stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules per hour (10 MMBtu/hr) but less than or equal to 107.2 gigajoules per hour based on the lower heating value of the fuel fired and that have commenced construction prior to October 3, 1982 are exempt from §60.332[§60.332(e)].

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
Gas-Fired Turbines NGT-14-1803, NGT-14-1804, NGT-14-1806, NGT-14-15188 and NGT-14-15189	40 C.F.R. 60, Subpart GG -Standards of Performance for Stationary Gas Turbines §60.332(a)(1) - Standards for NO_X	Standard applies to Electric Utility Stationary Gas Turbines, as defined in subpart. These units are not an Electric Utility Stationary Gas Turbine as defined in Subpart GG.
	40 C.F.R. 60, Subpart GG §60.334(a), (b), and (d) – Monitoring of Operations §60.335(b)(4) – Test Methods and Procedures	Applies only to affected turbines equipped with water injection to control emissions of NO_X. These units are not equipped with water injection to control emissions of NO_X.
	§§60.334(e), (f) – Monitoring of Operations	Applies only to affected turbines that commence construction after July 8, 2004. Emission units commenced construction prior to this date.
	§60.334(g) – Monitoring of Operations	Applies only to affected turbines subject to the continuous monitoring requirements of 40 C.F.R. 60.334(a), (d), or (f).
	§60.334(h)(2) – Monitoring of Operations	BPXA has not claimed an allowance for fuel bound nitrogen to calculate the applicable NO_X emission limit under §60.332.
	40 C.F.R. 60, Subpart A -General Provisions §60.7(a)(1) & (3) - Notification and Recordkeeping (Initial Notification) §60.8(a) – Performance Test, (Initial Performance Test Only)	Obsolete requirements - completed as required.
	§60.7(a)(4) - Notification and Recordkeeping	This requirement only applies to "existing facilities", as defined in 40 C.F.R. 60.2.
All Combustion Turbines	40 C.F.R. 60, Subpart KKKK – Standards of Performance for Stationary Combustion Turbines	Construction, modification, or reconstruction of each turbine commenced prior to the applicability date of February 18, 2005.
	40 C.F.R. 63, Subpart YYYY – National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines	Flow Station #3 is not a major source of HAPs and turbines located on the North Slope of Alaska are categorically exempt from this rule.
All Flares	40 C.F.R. 60, Subpart A – General Provisions §60.18 – General Control Device Requirements	The flares are not control devices used to comply with applicable subparts of 40 C.F.R. 60 or 40 C.F.R. 61. The flares are used as good air pollution control practice to minimize emissions during periods of process malfunction, startup, and shutdown.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
Stationary Source-Wide	40 C.F.R. 60, Subpart J -Standards of Performance for Petroleum Refineries 40 C.F.R. 60, Subpart GGG -Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries 40 C.F.R. 60, Subpart QQQ - Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems	Flow Station #3 does not meet the definition for a petroleum refinery.
	40 C.F.R. 60, Subpart KKK - Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants.	Flow Station #3 is not a natural gas processing plant as defined in subpart.
	40 C.F.R. 60, Subpart LLL – Standards of Performance for Onshore Natural Gas Processing Plants: SO_2 Emissions	Flow Station #3 does not operate natural gas sweetening units.
	40 C.F.R. 60, Subpart OOOO – Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution	Flow Station #3 does not have any onshore affected facilities listed in 40 C.F.R. 60.5365(a) through (g) for which BPXA commenced construction, modification, or reconstruction after August 23, 2011 (the applicability date of the rule).
	40 C.F.R. 61, Subpart J - National Emission Standards for Equipment Leaks (Fugitive Emission Sources) of Benzene	No process components in benzene service, as defined by subpart (10 percent benzene by weight).
	40 C.F.R. 61, Subpart M - National Emission Standards for Asbestos §61.142 - Standards for Asbestos Mills	Flow Station #3 is not an Asbestos Mill.
	§61.143 - Standards for Roadways	Flow Station #3 roadways not exposed to asbestos tailings or asbestos containing waste.
	§61.144 - Standards for Manufacturing	Flow Station #3 does not engage in any manufacturing operations using commercial asbestos.
	§61.146 - Standards for Spraying	Flow Station #3 does not spray apply asbestos containing materials.
	§61.147 - Standards for Fabricating	Flow Station #3 does not engage in any fabricating operations using commercial asbestos.
	§61.148 - Standards for Insulating Materials	Flow Station #3 does not install or reinstall, on any source component, insulation material containing commercial asbestos.
	§61.149 - Standards for Waste Disposal for Asbestos Mills	Applies only to those stationary sources subject to §61.142 (Asbestos Mills).

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	§61.151 - Standards for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations	Applies only to those stationary sources subject to §§61.142, 61.144, or 61.147 (Asbestos Mills, manufacturing or fabricating).
	§61.152 - Standards for Air-Cleaning	Flow Station #3 does not use air cleaning equipment.
	§61.153 - Standards for Reporting	No reporting requirements apply for sources subject to §61.145 (demolition and renovation)[ref. §61.153(a)].
	§61.154 - Standards for Active Waste Disposal Sites	Flow Station #3 is not an active waste disposal site and does not receive asbestos containing waste material.
	§61.155 - Standards for Inactive Waste Disposal Sites for Asbestos Mills and Manufacturing and Fabricating Operations	Flow Station #3 does not process regulated asbestos containing material (RACM).
Activities subject to 40 C.F.R. 61 Subpart M – Standards for Demolition and Renovation (§61.145)	40 C.F.R. 61, Subpart A - General Provisions §61.05(a) - Prohibited Activities §61.07 - Application for Approval of Construction or Modification §61.09 -Notification of Startup	Owners or operators of demolition and renovation operations are exempt from the requirements of §§61.05(a), 61.07, and 61.09[ref. 40 C.F.R. 61.145(a)(5)].
	§61.10 - Source Reporting and Waiver Request	Demolition and renovation operations are exempt from §61.10(a) [ref. 40 C.F.R. 61.153(b)].
	§61.13 - Emission Tests §61.14 - Monitoring Requirements	Emission tests or monitoring is not required under the standards for demolition and renovation [§61.145].
Stationary Source-Wide	40 C.F.R. 61, Subpart V - National Emission Standards for Equipment Leaks (Fugitive Emission Sources)	Flow Station #3 does not operate equipment in volatile hazardous air pollutant (VHAP) service (≥10 percent VHAP by weight).
	40 C.F.R. 61, Subpart Y - National Emission Standards for Benzene Emissions from Benzene Storage Vessels	Flow Station #3 does not operate storage vessels in benzene service.
	40 C.F.R. 61, Subpart BB - National Emission Standards for Benzene Emissions from Benzene Transfer Operations	Flow Station #3 does not conduct benzene transfer operations.
	40 C.F.R. 61, Subpart FF - National Emission Standards for Benzene Waste Operations	Flow Station #3 does not conduct benzene waste operations.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
	40 C.F.R. 63, Subpart B – Requirements for Control Technology Determinations for Major Sources in Accordance with Clean Air Act Sections 112(g) and 112(j)	Flow Station #3 is not a major source of HAPs.
	40 C.F.R. 63, Subpart T - National Emission Standards for Halogenated Solvent Cleaning	Flow Station #3 does not operate halogenated solvent cleaning machines.
	40 C.F.R. 63, Subpart CC - National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries	Flow Station #3 does not meet the definition for a petroleum refinery.
	40 C.F.R. 63, Subpart HH – National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities	This stationary source exclusively processes, stores, or transfers "black oil" (defined in the final promulgated rule as a petroleum liquid with an initial producing gas-to-oil ratio (GOR) less than 1,750 scf/bbl and an API gravity less than 40 degrees). Therefore, the black oil exemption under 40 C.F.R. 63.760(e)(1) of Subpart HH applies.
	40 C.F.R. 63, Subpart HHH – National Emission Standards for Hazardous Air Pollutants for Natural Gas Transmission and Storage Facilities	Flow Station #3 is considered part of the oil and natural gas production facility category (Subpart HH) and not part of the natural gas transmission and storage category (Subpart HHH) because it transports natural gas prior to the point of custody transfer where operations may be affected by Subpart HHH. Also, Flow Station #3 is not a major source of HAPs.
	40 C.F.R. 63, Subpart EEEE – National Emission Standards for Organic Liquid Distribution	Flow Station #3 is not a major source of HAPs and does not distribute organic liquids. In addition, the stationary source is an oil and natural gas production facility as the term "facility" is defined in §63.761 of 40 C.F.R. 63, Subpart HH. Organic liquid distribution (OLD) operations do not include the activities and equipment used to process, store, or transfer organic liquids at oil and gas production field facilities[40 C.F.R. 63.2334(c)(1).]
	40 C.F.R. 64 – Compliance Assurance Monitoring	Flow Station #3 does not use a control device to achieve compliance with any emission limitation or standard.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
Stationary Source-Wide	40 C.F.R. 68 - Accidental Release Prevention Requirements: Risk Management Programs[§ 112(r)]	"Naturally occurring hydrocarbon mixtures" (crude oil, condensate, natural gas and produced water), prior to entry into a petroleum refining process unit (NAICS code 32411) or a natural gas processing plant (NAICS code 211112) are exempt from the threshold determination. (See Final Rule exempting from threshold determination regulated flammable substances in naturally occurring hydrocarbon mixtures prior to initial processing, 63 FR 640[January 6, 1998]). Less than 10,000 lbs of other mixtures containing regulated flammable substances that meet the criteria for an NFPA rating of 4 for flammability are stored at the stationary source. Therefore, FS#3, a crude petroleum and natural gas extraction facility, (NAICS code 211111) does not process or store regulated flammable or toxic substances in excess of threshold quantities.
	40 C.F.R. 82.1, Subpart A - Production and Consumption Controls	Flow Station #3 does not produce, transform, destroy, import or export Class l or Group I or II substances or products.
	40 C.F.R. 82.30, Subpart B - Servicing of Motor Vehicle Air Conditioners	Flow Station #3 does not service motor vehicle air conditioners.
	40 C.F.R. 82.60, Subpart C -Ban on Nonessential Products Containing Class I Substances and Ban on Nonessential Products Containing or Manufactured with Class II Substances	Flow Station #3 is not a manufacturer or distributor of Class I and II products or substances.
	40 C.F.R. 82.80, Subpart D – Federal Procurement	Subpart applies only to Federal Departments, agencies, and instrumentalities.
	40 C.F.R. 82.100, Subpart E - The Labeling of Products Using Ozone-Depleting Substances.	Flow Station #3 is not a manufacturer or distributor of Class I and II products or substances.
	40 C.F.R. 82.158, Subpart F - Recycling and Emissions Reduction.	Flow Station #3 does not manufacture or import recovery and recycling equipment.
	40 C.F.R. 82.160, Subpart F - Approved Equipment Testing Organizations	Flow Station #3 does not contract equipment testing organizations to certify recovery and recycling equipment.
	40 C.F.R. 82.164, Subpart F – Reclaimer Certification	Flow Station #3 does not sell reclaimed refrigerant.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
Stationary Source-Wide	40 C.F.R. 82, Subpart F, Appendix C - Method for Testing Recovery Devices for Use With Small Appliances	Flow Station #3 is not a third party entity that certifies recovery equipment.
	40 C.F.R. 82, Subpart F, Appendix D - Standards for Becoming a Certifying Program for Technicians	Flow Station #3 does not have a technician certification program.
	40 C.F.R. 82.174(a) Subpart G - Significant New Alternatives Policy Program: Prohibitions	Flow Station #3 does not manufacture substitute chemicals or products for ozone-depleting compounds.
	40 C.F.R. 82.270(a) Subpart H - Halon Emissions Reduction	Flow Station #3 does not manufacture halon.
All Storage Tanks	40 C.F.R. 63, Subpart OO - National Emission Standards for Tanks - Level 1	Provisions only apply to tanks affected by 40 C.F.R. 60, 61, or 63 that specifically reference 40 C.F.R. 63, Subpart OO.
	40 C.F.R. 63, Subpart SS – National Emission Standards for Closed Vent Systems	Provisions only apply to tanks affected by 40 C.F.R. 60, 61, or 63 that specifically reference 40 C.F.R. 63, Subpart SS.
Drain Systems	40 C.F.R. 63, Subpart RR - National Emission Standards for Individual Drain Systems	Provisions only apply to drain systems affected by 40 C.F.R. 60, 61, or 63 that specifically reference 40 C.F.R. 63, Subpart RR.
Oil-Water Separators	40 C.F.R. 63, Subpart VV - National Emission Standards for Oil-Water Separators and Organic-Water Separators	Provisions only apply to oil-water separators and organic-water separators affected by 40 C.F.R. 60, 61, or 63 that specifically reference 40 C.F.R. 63, Subpart VV.
All Nonroad Engines	18 AAC 50.055(a)(1) – Fuel-Burning Equipment Emission Standards: Visible Emissions 18 AAC 50.055(b)(1) – Fuel-Burning Equipment Emissions Standards: Particulate Matter 18 AAC 50.055(c) – Fuel-Burning Equipment Emissions Standards: Sulfur Compound Emissions	Non-road (mobile) internal combustion engines are not included in the definition of fuel-burning equipment (18 AAC 50.990).

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

Section 11. Visible Emissions Forms

VISIBLE EMISSION OBSERVATION FORM

This form is designed to be used in conjunction with EPA Method 9, "Visual Determination of the Opacity of Emissions form 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."

- Stationary 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 VE 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, is Plume…: check "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 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.
- Organization: observer's employer.
- Certified By, Date: name of "smoke school" certifying observer and date of most recent certification.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR PERMITS PROGRAM - VISIBLE EMISSIONS OBSERVATION FORM

Page No.___________

Stationary Source Name	Type of Emission Unit	
Emission Unit Location		
City	State	Zip
Phone # (Key Contact)	Stationary Source ID Number	
Process Equipment	Operating Mode	
Control Equipment	Operating Mode	
Describe Emission Point/Location		
Height above ground level	Height relative to observer	Clinometer Reading
Distance From Observer Start End	Direction From Observer Start End	
Describe Emissions & Color Start	End	
Visible Water Vapor Present? If yes, determine approximate distance from the No Yes stack exit to where the plume was read		
Point in Plume at Which Opacity Was Determined		
Describe Plume Background Start End	Background Color Start End	
Sky Conditions: Start	End	
Wind Speed Start End	Wind Direction From Start End	
Ambient Temperature	Wet Bulb Temp	RH percent

SOURCE LAYOUT SKETCH: 1 Stack or Point Being Read 2 Wind Direction From
3 Observer Location 4 Sun Location 5 North Arrow 6 Other Stacks

I have received a copy of these opacity observations		
Print Name:		
Signature:		
Title	Date	

Observation Date | Start Time | End Time

Min \ Sec	0	15	30	45	Comments
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Range of Opacity

Minimum | Maximum

Print Observer's Name		
Observer's Signature		Date
		Observer's Affiliation:
Certifying Organization		
Certified By:	Date	

Data Reduction:

Duration of Observation Period (minutes):	Duration Required by Permit (minutes):
Number of Observations:	Highest Six–Minute Average Opacity (%):
Number of Observations exceeding 20%:	
In compliance with six-minute opacity limit? (Yes or No)	Highest 18-Consecutive –Minute Average Opacity (%)(engines and turbines only)

Average Opacity Summary:

Set Number	Time			Opacity		Comments
	Start	End		Sum	Average	

Section 12. Emission Factors

Use the emission factors in Table E to calculate the annual emission rates for Conditions 10.1 and 11.1.

Table E – Emission Factors

Type of Equipment	NO_X	CO	PM	SO_2
Gas Turbines, EU IDs 3 through 9	Emission rate equivalent to the allowable concentration or emission rate derived from a representative source test data if less than allowable concentration	The Permittee may use either an emission factor derived from a representative source test or the AP-42 emission factor of 0.082 lb/MMBtu (AP-42, 4/00). Use of the AP-42 emission factor is allowed only if it is higher than the source test emission factor or if a source test emission factor is unavailable.	The Permittee may use either the allowable short-term emission limit (0.014 lb/MMBtu),-AP-42 emission factor if greater than source test results, or representative source test data if less than allowable concentration. If source test data are not available, use of the AP-42 emission factor is acceptable.	Actual monthly H_2S concentration.

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

Section 13. Material Balance Calculation

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

A. = 31,200 x[**wt%S_{fuel}**] = 31,200 x _____ = _____

B. = 0.148 x[**wt%S_{fuel}**] = 0.148 x _____ = _____

C. = 0.396 x[**wt%C_{fuel}**] = 0.396 x _____ = _____

D. = 0.933 x[**wt%H_{fuel}**] = 0.933 x _____ = _____

E. = B + C + D = _____ + _____ + _____ = _____

F. = 20.9 –[**vol%$_{dry}O_{2,\ exhaust}$**] = 20.9 - _____ = _____

G. =[**vol%$_{dry}O_{2,\ exhaust}$**] ÷ F = _____ ÷ _____ = _____

H. = 1 + G = 1 + _____ = _____

I. = E x H = _____ x _____ = _____

SO_2 concentration = A ÷ I = _____ ÷ _____ = _____ ppm

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

The fuel weight percent (wt%) of sulfur is obtained pursuant to Conditions 9.5 and/or 9.6. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (vol%$_{dry}O_2$, 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 engine 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%$_{dry}O_2$, exhaust = 3.00%, then enter 3.00, not 0.03.

[18 AAC 50.346(c)]

Section 14. ADEC Notification Form[23]

Flow Station #3	AQ0269TVP02
Stationary Source Name	**Air Quality Permit No.**
BP Exploration (Alaska), Inc.	
Company Name	**Date**

When did you discover the Excess Emissions/Permit Deviation?

Date: _____ / _____ / _____ Time: _____ :/ _____

When did the event/deviation occur?

Begin Date: _____ / _____ / _____ Time: _____ : _____ (Use 24-hr clock.)

End Date _____ / _____ / _____ Time: _____ : _____ (Use 24-hr clock.)

What was the duration of the event/deviation? ____ : ____ (hrs:min) or _____ days

(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

Reason for Notification: (please check only 1 box and go to the corresponding section)

☐ Excess Emissions – Complete Section 1 and Certify

☐ Deviation from Permit Condition – Complete Section 2 and Certify

☐ Deviations from COBC, CO, or Settlement Agreement – Complete Section 2 and Certify

Section 1. Excess Emissions

- Was the exceedance: ☐ Intermittent or ☐ Continuous
- Cause of Event (Check one that applies):

☐ Start Up/Shut Down ☐ Natural Cause (weather/earthquake/flood)

☐ Control Equipment Failure ☐ Schedule Maintenance/Equipment Adjustment

☐ Bad Fuel/Coal/Gas ☐ Upset Condition ☐ Other _____

- Description
  Describe briefly, what happened and the cause. Include the parameters/operating conditions exceeded, limits, monitoring data and exceedance.

- Emissions Units Involved:
  Identify the emission unit involved in the event, using the same identification number and name as in the permit. Identify each emission standard potentially exceeded during the event and the exceedance.

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

[23] Revised as of August 20, 2008.

- Type of Incident (please check only one):

☐ Opacity _____ % ☐ Venting _____ gas/scf ☐ Control Equipment Down

☐ Fugitive Emissions ☐ Emission Limit Exceeded ☐ Other _____

☐ Marine Vessel Opacity ☐Flaring _____

- Unavoidable Emissions:

Do you intend to assert that these excess emissions were unavoidable? ☐ Yes ☐ No

Do you intend to assert the affirmative defense of 18 AAC 50.235? ☐ Yes ☐ No

Certify Report (Go to end of form.)

Section 2. Permit Deviations

(a) Permit Deviation Type (check only one box, corresponding with the section in the permit):

☐ Emission Unit-Specific

☐ Failure to Monitor/Report

☐ General Source Test/Monitoring Requirements

☐ Recordkeeping/Reporting/Compliance Certification

☐ Standard Conditions Not Included in the Permit

☐ Other Section: _____ (Title of section and section number of your permit).

☐ Generally Applicable Requirements

☐ Reporting/Monitoring for Diesel Engines

☐ Recordkeeping Failure

☐ Insignificant Emission Unit

☐ Stationary Source Wide

(b) Emission Unit Involved:

Identify the emission unit involved in the event, using the same identification number and name as in the permit. List the corresponding permit conditions and the deviation.

EU ID	EU Name	Permit Condition/Potential Deviation

(c) Description of Potential Deviation:
Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) Corrective Actions:
Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

Certification:

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

Printed Name: _____ Title: _____ Date: _____

Signature: _____ Phone Number: _____

NOTE: *This document must be certified in accordance with 18 AAC 50.345(j)*

To Submit this Report:

Fax to: 907-451-2187

Or

Email to: DEC.AQ.Airreports@alaska.gov

If faxed or emailed, the report must be certified within the Operating Report required for the same reporting period per Condition 68.

Or

Mail to: ADEC
Air Permits Program
610 University Avenue
Fairbanks, AK 99709-3643

Or

Phone Notification: 907-451-5173

Phone notifications require a written follow-up report.

Or

Submission of information contained in this report can be made electronically at the following website:

https://myalaska.state.ak.us/dec/air/airtoolsweb/If submitted online, report must be submitted by an authorized E-Signer for the stationary source.

[18 AAC 50.346(b)(3)]

Section 15. Emission Inventory Form

ADEC Reporting Form Emission Inventory Reporting State of Alaska Department of Environmental Conservation Division of Air Quality	**Emission Inventory Year-[ ]**
Mandatory information is highlighted. Make additional copies as needed.	

Inventory start date:	
Inventory end date:	
Inventory Type:	

Facility Information:	
ADEC Stationary Source ID:	
(Stationary Source) Facility Name:	
AFS ID:	
Census Area/ Community:	
Line of Business (NAICS):	
Contact/Owner Name:	
Contact Owner Address:	
Contact/Owner Phone Number:	
Facility Physical Address:	
	Lat: Long:
Mailing Address :	

Emission Unit:	
ID:	
Description:	
Manufacturer:	
Model Number:	
Serial Number:	
Year of Manufacture:	
Maximum Nameplate Capacity:	
Design Capacity (BTU/hr):	
Control Equipment (List All):	
	Control Equipment Type (Primary or Secondary):
	ID:

	Type:
	Manufacturer:
	Model:
	Control Efficiency (%):
	Capture Efficiency (%):
	Total Capture Efficiency (%):
	Pollutants Controlled

Processes (List All):	
	PROCESS:
	SCC Code:
	Material Processed:
	Operational Periods:
	FUEL INFORMATION
	Ash Content (weight %):
	Elem. Sulfur Content (weight %):
	H_2S Sulfur Content (ppmv):
	Heat Content (MMBtu/1000 gal or MMBtu/MMscf):
	Heat Input (MMBtu/hr):
	Heat Output (MMBtu/hr):
	THROUGHPUT
	Total Amount:
	Summer %:
	Fall %:
	Winter %:
	Spring %:
	Days/Week of Operation:
	Weeks/Year of Operation:
	Hours/Day of Operation:
	Hours/Year of Operation:

EMISSIONS					
Pollutant	**Emission Factor**	**Emission Factor Numerator**	**Emission Factor Denominator**	**Emission Factor Origin**	**Tons Emitted**
CO					

NH_3					
NO_X					
PM_{10}-PRI					
$PM_{2.5}$-PRI					
SO_2					
VOC					
Lead and lead compounds					

Stack Description:	
	Stack Detail:
	ID:
	Type:
	Measurement Units:
	Base Elevation:
	Stack Height:
	Stack Diameter:
	Exit Gas Temp:
	Exit Gas Velocity:
	Actual Exit Gas Flow Rate:
	Data Source:
	Description:
	Latitude:
	Longitude:
	Location Description:
	Method Accuracy Description (MAD) Codes (as defined in 40 C.F.R. 51.50)
	Horizontal Reference Datum Code:
	Horizontal Accuracy (m):
	Horizontal Collection Method Code:

Certification:

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

Printed Name:_____Title_____Date _____

Signature:_____ Phone number_____

NOTE: *This document must be certified in accordance with 18 AAC 50.345(j)*

To Submit this report:

1. Fax this form to: 907-465-5129; or
2. E-mail to: DEC.AQ.airreports@alaska.gov; or
3. Mail to: ADEC

Air Permits Program
410 Willoughby Ave., Suite 303
PO Box 111800
Juneau, AK 99801-1800

Or

4. Submission of information can be made via a full electronic batch submittal (XML files). This will require each data element to be tagged with XML (Extensible Markup Language) code before it can be uploaded to ADEC database.

https://myalaska.state.ak.us/dec/air/airtoolsweb/EiXmlValidator.aspx

[18 AAC 50.346(b)(9)]

Section 16. NSPS Subpart Ka Operation and Maintenance Plan

FINAL

NSPS SUBPART Ka

OPERATION AND MAINTENANCE PLAN *FOR*

BP EXPLORATION (ALASKA) INC.

PBU Flow Station #3

Overflow/Dirty Water Tank 14-1951
Flow Station #3
Prudhoe Bay, Alaska

March 2003

NSPS SUBPART Ka
OPERATION AND MAINTENANCE PLAN
OVERFLOW/DIRTY WATER TANK 14-1951
AT PBU FLOW STATION #3

Prepared for:
BP EXPLORATION (ALASKA) INC.
Anchorage, Alaska
Prepared by:

SECOR

SECOR INTERNATIONAL INCORPORATED
4700 McMurry Drive, Suite 101
Fort Collins, Colorado 80525

March 2003

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1.0 INTRODUCTION

BP Exploration (Alaska) Inc. (BPXA) operates and maintains a vertical fixed roof storage tank at the Prudhoe Bay Flow Station #3 (FS-3) that is classified by federal New Source Performance Standards (NSPS) from the Code of Federal Regulations in 40 CFR 60. NSPS Subpart Ka, Standards of Performance for Storage Vessels for Petroleum Liquids, affects the storage tank, source name Overflow/Dirty Water Tank 14-1951.

Subpart Ka sets standards for controlling emissions of volatile organic compounds (VOCs) from affected tanks that were modified or commenced construction or reconstruction after May 18, 1978, and prior to July 23, 1984. The Overflow/Dirty Water Tank 14-1951 was constructed in 1981. The 14-1951 tank vapor recovery piping is part of an overall vapor recovery system for the FS-3 Produced Water Handling. A general process flow diagram for the Produced Water Handling system is shown in Figure 1-1.

For those tanks subject to Subpart Ka and equipped with a vapor recovery and return system, the process equipment is to be designed and operated to reduce the tank Volatile Organic Compounds (VOC) emissions to the atmosphere by at least 95 percent by weight. VOC emissions from Tank 14-1951 are collected in a vapor recovery system using a Jet Compressor and returned to the facility's gas handling process. Through use of the Jet Compressor and associated piping of the overall vapor recovery system (Figure 1-1), 100 percent elimination of VOC emissions from the tank during normal operations are achieved. This meets the 95 percent control standards for VOC emissions as set forth in the rule [40 C.F.R. 60.112a(a)(3)].

Subpart Ka of 40 CFR 60 requires the owner/operator to provide an operation and maintenance (O&M) plan to the Administrator (U.S. EPA). This O&M Plan (Plan) has been developed to ensure that the vapor recovery and return system operates in conformance with design specifications and meets the required control of VOC emissions.

The primary objective of this Plan is to implement procedures to:

- Ensure that the vapor recovery and return system is operated to collect at least 95 percent by weight of VOC vapors and gases discharged from the affected storage vessel when emissions may be vented from the vessel except during periods of startup, shutdown or malfunction; and

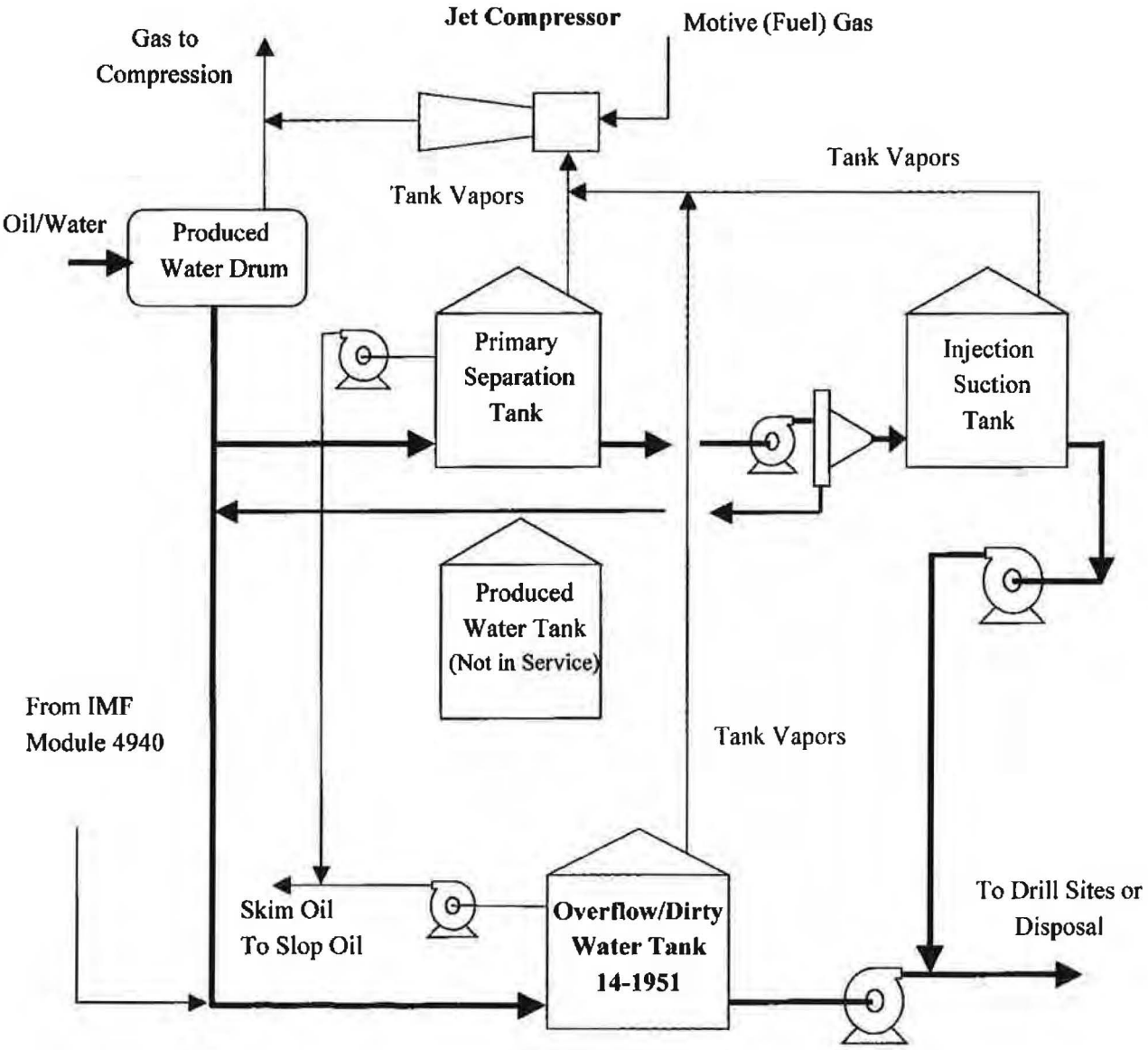


FIGURE 1-1: GENERAL PROCESS FLOW FOR PRODUCED WATER HANDLING

- Ensure at all times, including periods of startup, shutdown and malfunction, that the tank and associated vapor recovery and return system(s) are maintained and operated, to the extent practicable, in a manner consistent with good air pollution control practices for minimizing emissions.

The NSPS affected tank, 14-1951, and the associated vapor recovery jet compressor, 14-2805, in operation at FS-3 are described in Chapter 2 of this Plan. Chapter 3 presents the applicable NSPS Subpart Ka and Subpart A work practices, standards, and compliance methods. The Standard Operating Procedures (SOPs) and normal maintenance procedures for the affected tank and associated vapor recovery and return system are referenced in Chapter 4. In Chapter 5, a summary and discussion of applicable recordkeeping requirements for Subpart Ka tank 14-1951 are presented.

This Plan will be updated as needed to maintain compliance with VOC standards and testing and procedures provisions of NSPS Subpart Ka. SOPs incorporated by reference by this Plan are provided as Appendix A and the Facility Piping and Instrumentation Diagram (P&ID) for the Produced Water Facility is shown in Appendix B.

2.0 FLOW STATION #3 PROCESS EQUIPMENT

2.1 Overflow/Dirty Water Tank 14-1951

The Overflow/Dirty Water Tank (14-1951) may receive water and minor amounts of hydrocarbon diverted from the Produced Water Drum and from IMF module (4940) fizzy oil line pigging divert as shown in Figure 1-1. Fluids from the 14-1951 tank are normally pumped to the slop oil tanks for processing. Table 2-1 provides the dimensions and capacity of the Overflow/Dirty Water Tank 14-1951. Figure 2-1 provides a simplified process flow and piping diagram of Tank 14-1951 and the Jet Compressor 14-2805 used for vapor recovery and return to the main compression system at the facility.

TABLE 2-1

PHYSICAL DIMENSIONS OF NSPS-AFFECTED OVERFLOW/DIRTY WATER TANK 14-1951

Tank ID	Service/ Contents	Tank Dimensions (ft)		Tank Storage Capacity	
		Inner Diameter	Shell Height	(m^3)	(gal.)
14-1951	Overflow/Dirty Water Tank	50	30	1,664	439,824

2.2 Vapor Recovery System

2.2.1 General Description

The vapor recovery and return system serving Tank 14-1951, as shown in Figure 2-1, consists of:

- Two lines (2" and 4" OD) which provide fuel gas as a blanket gas above the liquid level in the tank;
- Jet Compressor 14-2805 which provides suction on the vapor space of the tank through use of a high pressure motive gas running current through the vortex of the jet compressor; and

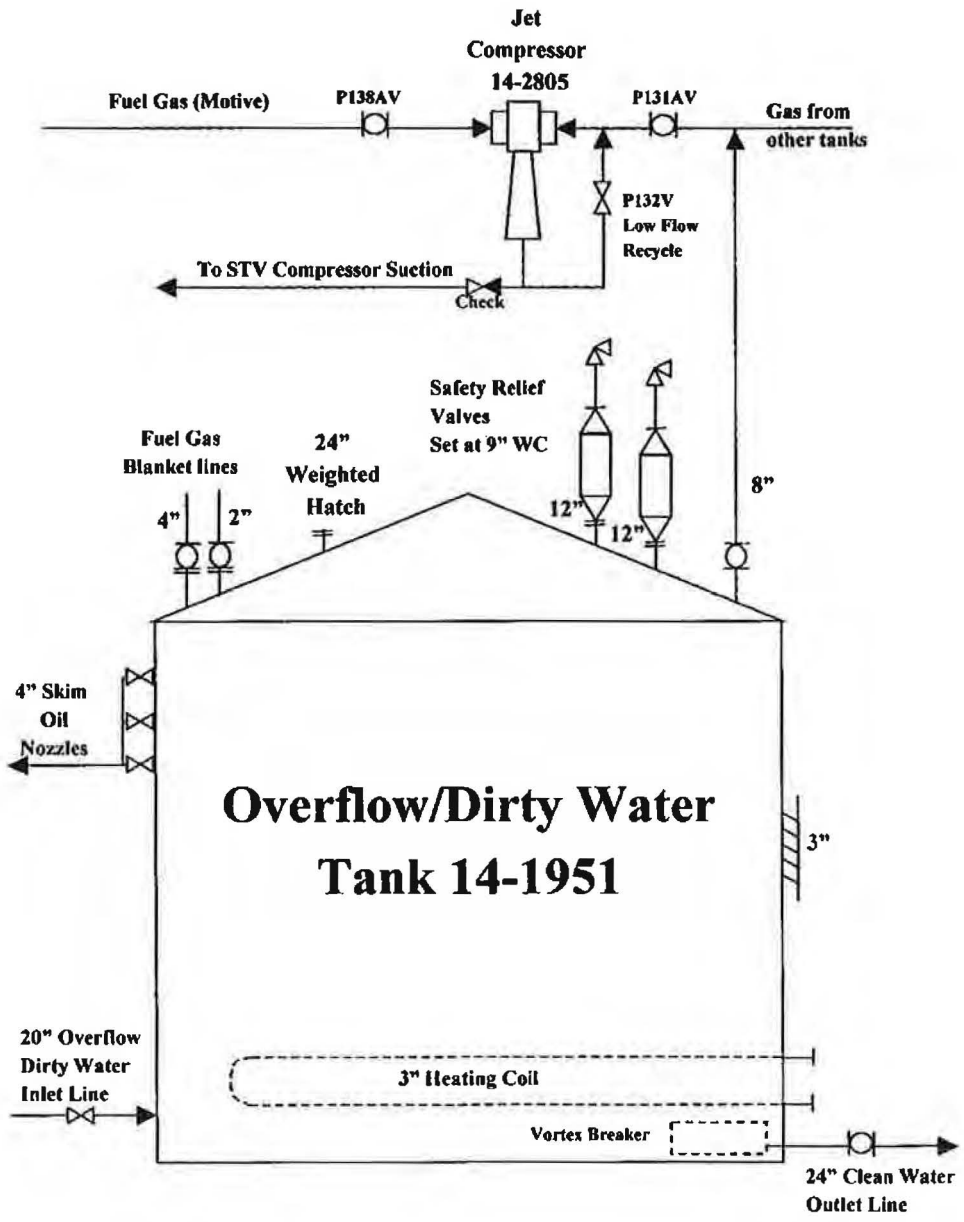


FIGURE 2-1: PROCESS PIPING FOR VAPOR RECOVERY AND RETURN SYSTEM -TANK 14-1951

- A high velocity-low pressure discharge gas line that routes both fuel (motive) gas and captured vapors to the facility main compressors.

2.2.2 Overflow/Dirty Water Tank Vapor Blanketing

The fuel gas blanket system is designed and operated to:

- To maintain 0-5" water column (WC) in the vapor space of the tank, providing a normal suction pressure for operation of the jet compressor;
- Provide backup or redundancy with two lines and a bypass valve;
- Maintain the tank atmosphere within the tank headspace above the flammable or combustible liquid to reduce ignition potential;
- Prevent vacuum and the ingress of atmospheric air; and
- Prevent freeze ups with the tank valves being winterized.

2.2.3 Jet Compressor 14-2805 General Description

Vapor Recovery Jet Compressor 14-2805 is a continuous flow compressor that has no moving parts and consequently has very high on stream efficiency. This compressor is used to compress gas from near atmospheric pressures to some higher pressure. Figure 2-2 shows the P&ID for Jet Compressor 14-2805. The Jet Compressor has a design capacity of 130,000 SCFH at 6-psig discharge pressure. Schutte and Koerting Company manufacture the Jet Compressor.

As the water level in Overflow/Dirty Water Tank 14-1951 (and the other two tanks the compressor draws vapor from) rises, the pressure of the fuel gas blanket above the water increases. The gas blanket is made up of fuel gas and gas that is entrained in the produced water. Arriving in the atmospheric tanks from the Process Water Drum, the gas breaks out of the water. Also, rising tank levels displacing gas contribute to the off gas, but it is not the main source of the gas to Jet Compressor 14-2805.

To keep this pressure below the design pressure of the tank, the excess gas must be removed. Instead of venting the gas to the atmosphere, the jet compressor compresses the gas so it can be recovered by the STV main compression facility at FS-3.

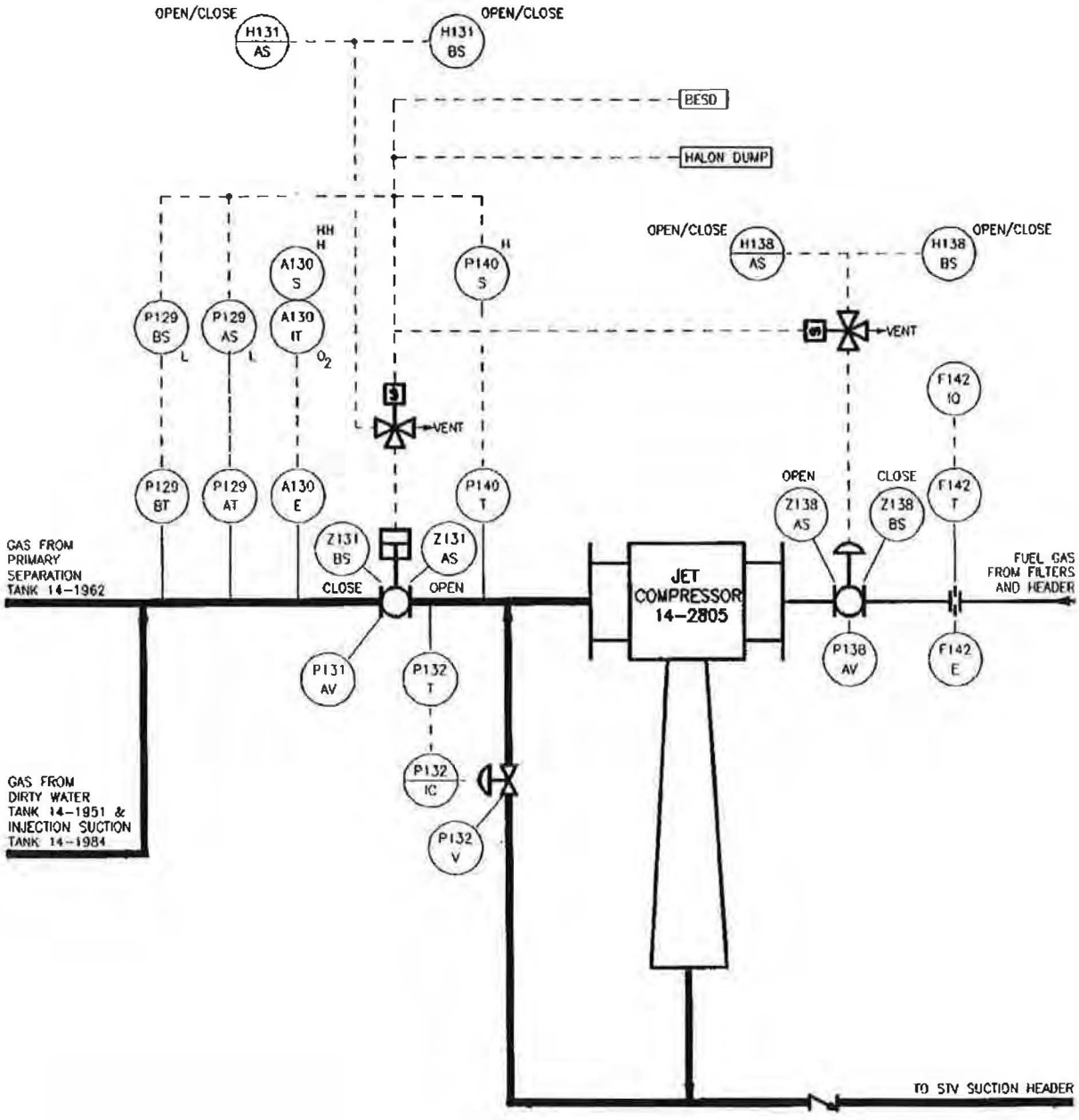


FIGURE 2-2: VAPOR RECOVERY JET COMPRESSOR 14-2805

The excess low-pressure blanket gas is gathered from the three tanks and routed to the compressor suction. Unlike other compressors, jet compressors can handle liquid carryover without physical damage, again attesting to their high on stream efficiency. To keep liquid at a minimum, the suction lines have drip boots with level gauges. All liquid collected in these boots drain to the module sump pump suction for recovery.

Jet compressors must use high-pressure gas as a motive gas. In this application, 275-psig fuel gas is used as the motive gas (Figures 2-1 and 2-2).

2.2.4 Jet Compressor 14-2805 Controls and Operation

To maintain constant operation, a minimum suction pressure is provided by Pressure Control System P-132-T/IC/V (see Figure 2-2). The P-132IC set point is 5 inches of water column. If the suction pressure drops below this set point, the compressor discharge is recycled back to the jet compressor suction by P132-V. P-132V is a quick opening type valve and is designed so, that at average tank vapor flow rate, the valve is open approximately 50 percent. At this position, the valve can handle 75 percent of the total flow rate from the tanks whose vapors feed into the system.

There are no high suction pressure controls. Suction flows through P-131AV, which is activated by H131-AS/BS Open/Close buttons on the feed valve to the jet compressor.

A motive gas drives the compressor. In this application, fuel gas is used as the motive gas. This gas enters a high-pressure nozzle in the compressor and forms a high velocity jet of gas. The jet flows across a suction chamber and entrains the tank vapors in the chamber. At this point, the gas jet and tank vapor mixture flows to a diffuser. In the diffuser, the velocity is reduced and the pressure increases.

The motive gas is controlled by P138-AV via H138-AS located in the local control room, and H138-BS at floor level located in Module 4942.

Activation of the open/close buttons controls Valve P138-AV to allow the proper amount of valve opening to supply motive gas to hold a constant tank suction pressure. The flow rate of motive gas is measured and totaled by the F142-E/T/IQ controller.

2.2.5 Jet Compressor 14-2805 Safety Systems

Vapor recovery Jet Compressor 14-2805 is protected against process upsets at two levels to prevent danger to human life, and damage to the equipment or the environment.

The first level of protection sounds an alarm to alert the operator of an anomalous operating condition. The alarms sounds in the PWI control room. In the main control room, alarms annunciate and a message appears on the FS3 alarm summary screen for attention by the operators.

The safety and environmental devices in this level of protection are high oxygen content, closed position of the tank vapor flow valve P131-AV, and closed position of the motive gas flow valve P138-AV.

The second level of protection sounds an alarm automatically. Alarms annunciate in the Module 4937 Control Room. In the Main Control Room, alarms annunciate and a message appears on the FS3 alarm summary screen.

The safety and environmental devices in this second level of protection are low suction pressure on P129-BSL & ASL under 0" WC, High-High Oxygen content alarm, and high suction pressure on P140-SH valve over 5" WC.

3.0 WORK PRACTICE STANDARDS AND COMPLIANCE DEMONSTRATION

3.1 Standard for Volatile Organic Compounds [§60.112a(a)(3)]

The vapor recovery and return system serving Overflow/Dirty Water Tank 14-1951 must be designed to collect at least 95 percent by weight of the VOC vapors and other gases vented from the tank during normal operation.

3.1.1 Demonstration of Compliance with §60.112a(a)(3)

The vapor recovery and return system described in Section 2.2 is designed and operated to capture and return back to the low-pressure gas compression system 100 percent of the gas/vapor discharged from the 14-1951 tank during normal operations, in addition to 100 percent of the vapors from the two other tanks that are part of the system.

The system is designed to accommodate the maximum vapor displacement rate due to release of gas from the dirty water entering the tank at its maximum liquid input rate during tank filling operations. The system is designed for 130,000 SCFH at a 6-psig discharge pressure in order to handle all three tanks at their maximum vapor release rates.

3.2 Test Methods and Procedures [§60.113a(a)(2)]

The vapor recovery and return system controlling gases from Overflow/Dirty Water Tank 14-1951 is operated in accordance with the Work Practice Standards and Standard Operating Procedures set forth or incorporated by reference by this Plan.

3.3 Monitoring of Operations [§60.115a]

The affected tank at FS-3 (14-1951) is equipped with a vapor recovery and returns system and is, therefore, exempt from monitoring of operations provisions of 40 CFR 60.115a [40 CFR 60.115a(d)(2)].

3.4 Standards and Maintenance Requirements [§60.11(d)]

At all times, including periods of startup, shutdown and malfunction, the tank and vapor recovery and return system(s) shall, to the extent practicable, be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions.

3.4.1 Compliance with §60.11(d)

The tank and vapor recovery and return system(s) are operated at all times according to Standard Operating Procedures (SOPs) developed by BPXA for FS-3. Malfunctions are corrected as soon as practicable after occurrence. Routine inspections and maintenance of the affected tank, vapor recovery and return system(s), critical process sensors, indicators and process control systems are conducted in accordance with the SOPs incorporated by reference by this Plan (Appendix A).

4.0 STANDARD OPERATING PROCEDURES

Standard Operating Procedures (SOPs) developed by BPXA for the affected tank and associated vapor collection and return system are incorporated by reference into this Plan. If an SOP is revised or altered, this Plan need not be revised and resubmitted for approval by the Administrator. Current SOPs are provided as Appendix A to this Plan. Appendix A will be updated each time a relevant SOP is amended.

The SOPs for the Overflow/Dirty Water Tank 14-1951 vapor recovery system provide guidance and operational procedures for:

- Startup Guidelines;
- Temporary/emergency operations (generic facility procedures);
- Normal operations; and
- Normal shutdown.

The SOPs also outline procedures for routine checks of process operation and define instrumentation, alarms, shutdowns, and safe limits of operation.

5.0 RECORDKEEPING

Records may be kept in an electronic or other permanent format. The following records will be maintained on file at the facility:

- Copy of O&M Plan and SOPs;
- Maintenance records; and
- Startup, Shutdown and Malfunction Records.

Copies of all records required by this plan shall be kept for at least 5 years, except that the copy of this Plan shall be kept for the life of the affected tank.

5.1 O&M Plan

An up-to-date copy of this Plan will be kept on file at the facility. The SOPs incorporated by reference by this Plan will be kept current and on file with the Plan.

5.2 Maintenance Records

Records will be maintained to document those maintenance activities were conducted in accordance with the SOPs. Records of all maintenance performed on Overflow/Dirty Water Tank 14-1951, Jet Compressor 14-2805, and sensors and monitoring equipment will be maintained.

5.3 Startup, Shutdown and Malfunction Records [40 CFR 60.7(b)]

Records of the occurrence and duration of any startup, shutdown or malfunction in the operation of the affected tanks and vapor recovery and return system will be maintained in accordance with 40 CFR 60.7(b).

For purposes of this Plan, malfunction shall mean "any sudden, infrequent, and not unreasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner" (reference 40 CFR 60.2).

APPENDIX A
STANDARD OPERATING PROCEDURES

NSPS SUBPART Ka OPERATION AND MAINTNENACE PLAN
Flow Station #3
Prudhoe Bay, Alaska
SECOR Project No.: 12BP.16402.02.0082
March 2003

Location:	PRUDHOE BAY FIELD	Facility: FS-3
Section:	PRODUCED WATER HANDLING : PRODUCED WATER TREATMENT	
Description:	**OVERFLOW/DIRTY WATER TANK 14-1951 CONSEQUENCES OF DEVIATION**	

LEVEL

SETPOINTS/ OP LIMITS	DEVICE	CONSEQUENCES OF DEVIATION	OPERATOR RESPONSE
30' 0"	Tank Height		OSD PWI System.
23' 4" (80%)	L9-AYHHH	Stops Inflow By Closing L304-BV	Ensure L304-BV has closed. Start Pumps 14-15151/15152. Ensure there are no other sources flowing into DWT. Check level of IST and lower if level is coming in balance line.
	L9-AS	Stops Inflow By Closing L38-V On PWD	Ensure L38-V has closed. Manually block downstream of L38-V.
17' 2" (55.2%)	L9-BYHH	Alarm	Ensure pump screens are not plugged. Check divert valves on PWD and IST for proper position. Check for leaking valves from IMF. Check run status of Pumps 14-15151/ 15152 and run as needed.
11' 3" (30%)	L9-CYH	Starts Pumps (AUTO Mode)	Ensure pumps start. Monitor operation, as needed.
22-10%		Starts Pumps (MANUAL) Stops Pumps (MANUAL)	Normal operating range (digital readout), manually starts and stops Pumps 14-15151/ 15152.
7' 9" (16%)	L9-DYL	Stops Pumps (AUTO Mode)	Ensure pumps stop.

NOTE: DWT 14-19551 is normally operated at 22-10% of tank capacity in MANUAL mode, which is in the low level alarm stage. This condition is normal and no operator response is necessary.

PRESSURE

SETPOINTS/OP LIMITS	DEVICE	CONSEQUENCES OF DEVIATION	OPERATOR RESPONSE
10.0" wc	P6-SV	Vents To Atmosphere Via Internal Design Diff. Press. Thief Hatch (Weighted)	Block all inflow to DWT. Check and start the DWT return pumps. Ensure Blanket Gas System is working properly. Ensure relief valves are operating.
9.8" wc	P9-SH	Stops Inflow By Closing L38-V On PWD	Check blanket gas controllers. Check for liquid in sensing line. Ensure L38-V has closed. Manually block downstream of L38-V, if necessary.
9.0" wc	P7-SV P8-SV	Vents To Atmosphere	Check divert valves on PWD and IST for proper position. Check for leaking valves from IMF. Check run status of Pumps 14-15151/ 15152 and operate as needed. Check makeup gas controllers for proper operation.
1.0" wc		Normal Operation	
0.25" wc	P3-CV P4-CV	Admits Blanket Gas (Fast Blanket Gas Makeup When Pilot Pressure < 17.5" wc)	Check and adjust blanket gas controllers for proper operation.
-1.0" wc	P8-SV P7-SV	Admits Air (To Protect Tank From Vacuum Collapse)	Check and adjust blanket gas controllers for proper operation. Shut down Pumps 14-15151/15152.
-1.25" wc		External Design Differential Pressure	Ensure no outflow from DWT.

TEMPERATURE

SETPOINTS/OP LIMITS	DEVICE	CONSEQUENCES OF DEVIATION	OPERATOR RESPONSE
170°F		Design High Temperature	Check and adjust operation of T10-IC.
40°F	T10-IC	Normal Control Via T10-V	
35°F	T10-SL	Alarm	Check and adjust operation of T10-IC.

End of Document

APPENDIX B
VAPOR RECOVERY SYSTEM P&ID FOR OVERFLOW/DIRTY WATER TANK 14-1951

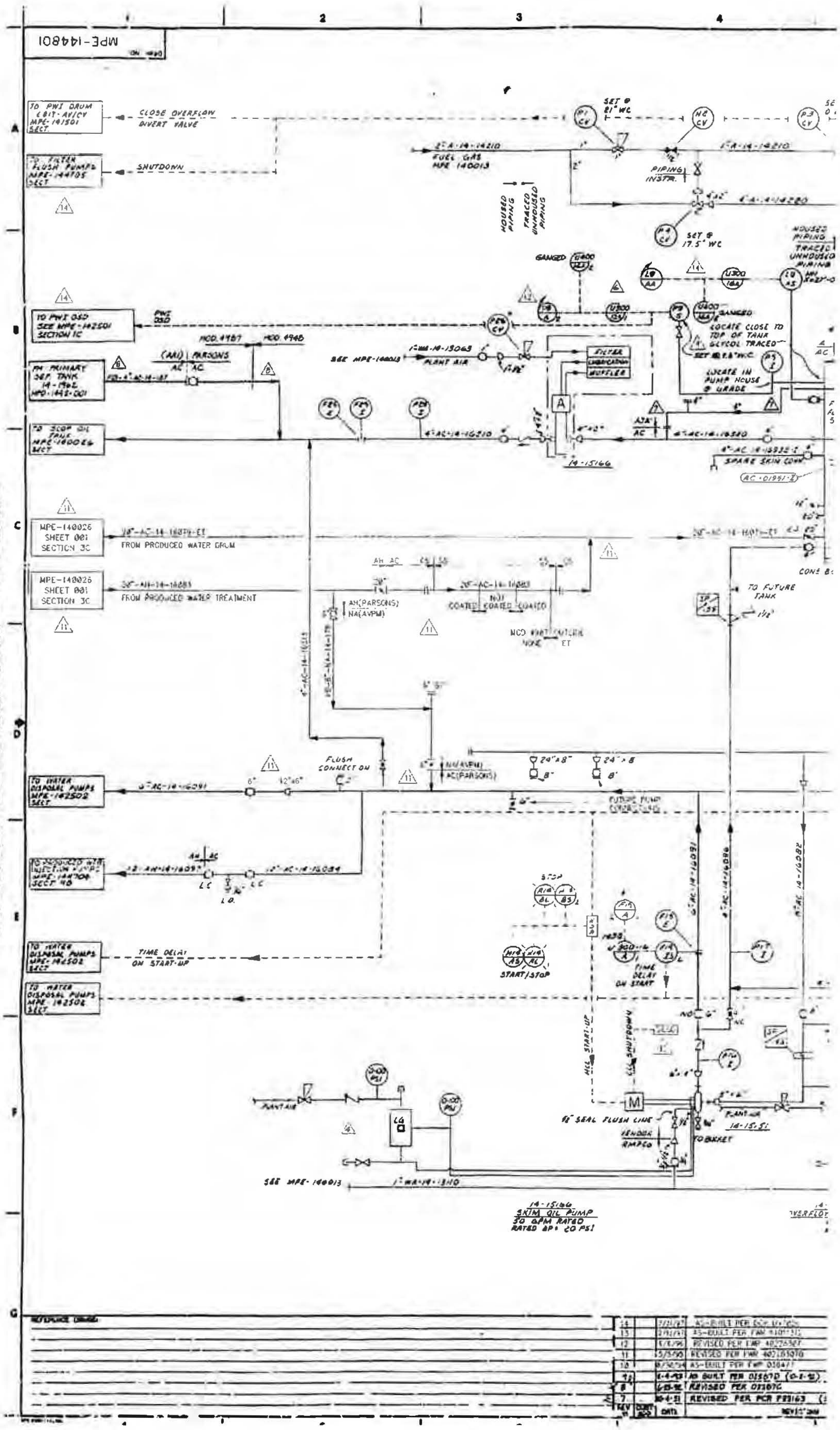
NSPS SUBPART Ka OPERATION AND MAINTNENACE PLAN

Flow Station #3

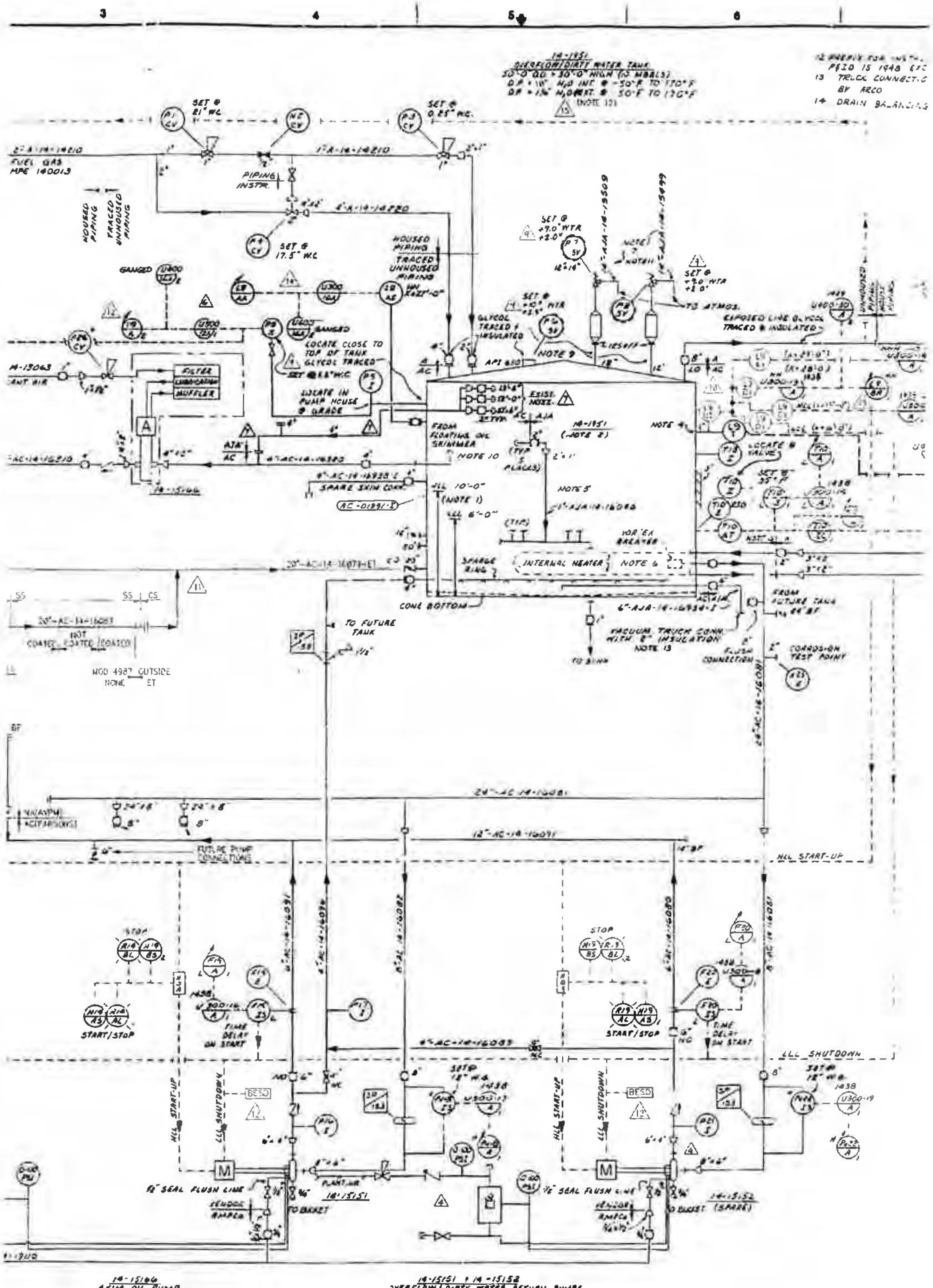
Prudhoe Bay, Alaska

SECOR Project No.: 12BP.16402.02.0082

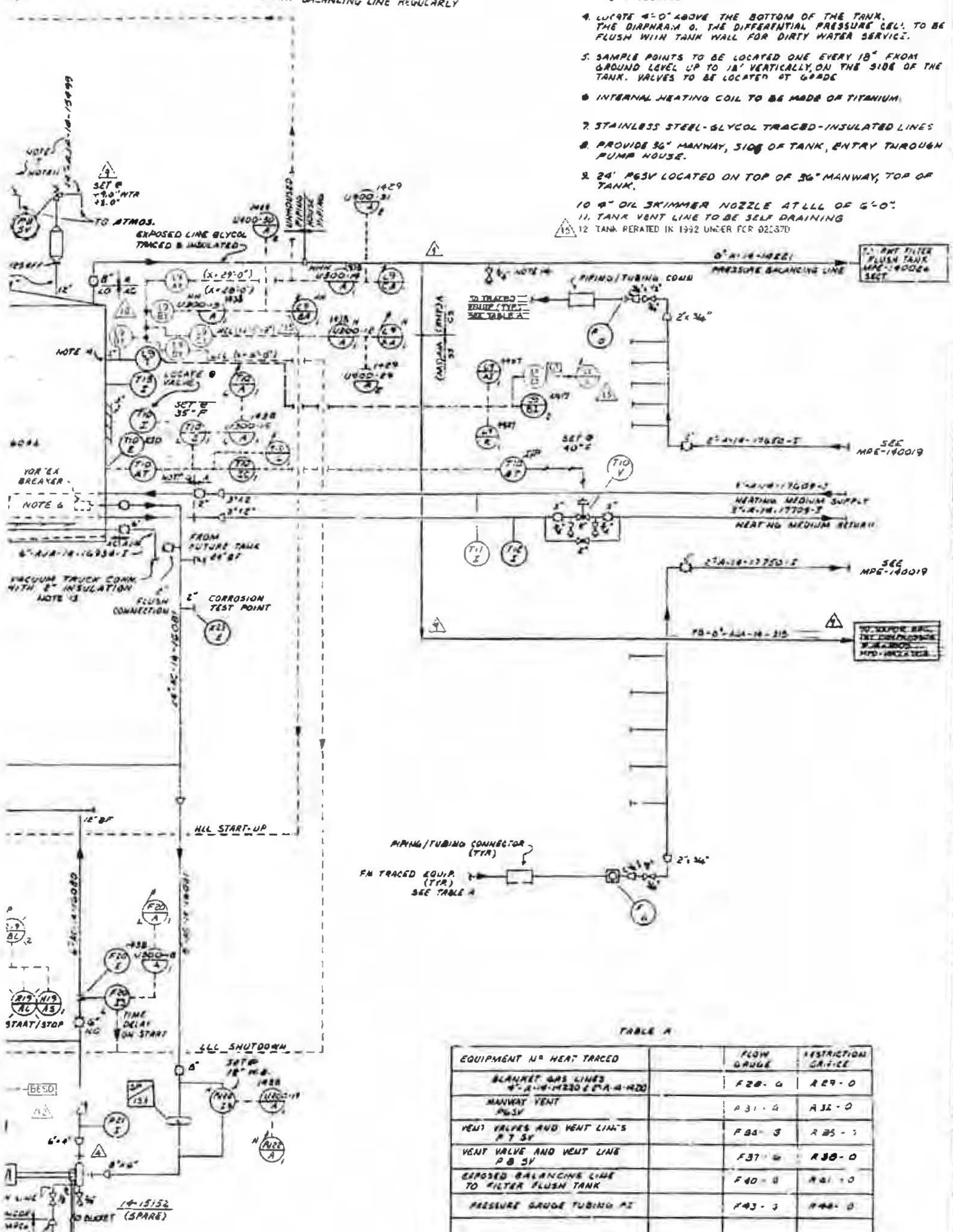
March 2003



MPE-144801
TO PWI DRUM
CLOSE OVERFLOW DIVERT VALVE
SHUTDOWN
FUEL GAS MPE 140013
HOUSED PIPING
TRACED UNHOUSED PIPING
SET @ 17.5" WC
GANGED
TO PWI OSD SEE MPE-142501 SECTION 1C
PLANT AIR
FILTER
LUBRICATOR
MUFFLER
LOCATE CLOSE TO TOP OF TANK GLYCOL TRACED
LOCATE IN PUMP HOUSE @ GRADE
FM PRIMARY SEP. TANK
TO SLOP OIL TANK
SPARE SKIN CONN
MPE-140026 SHEET 001 SECTION 3C
FROM PRODUCED WATER DRUM
FROM PRODUCED WATER TREATMENT
TO FUTURE TANK
FLUSH CONNECT ON
TO WATER DISPOSAL PUMPS MPE-142502 SECT.
TIME DELAY ON START-UP
START/STOP
TIME DELAY ON START
HLL START-UP
LLL SHUTDOWN
1/2" SEAL FLUSH LINE
VENDOR RMPCo
TO BUCKET
PLANT AIR
SEE MPE-140013
14-15166 SKIM OIL PUMP 30 GPM RATED RATED ΔP = 60 PSI
REFERENCE DRWGS.
AS-BUILT PER ECN
REVISED PER FMP
AS BUILT PER
REVISED PER
REVISED PER PCR
REV
DATE



14-1951
OVERFLOW/DIRTY WATER TANK
FUEL GAS
HOUSED PIPING
TRACED UNHOUSED PIPING
GANGED
FILTER
MUFFLER
LOCATE CLOSE TO TOP OF TANK GLYCOL TRACED
LOCATE IN PUMP HOUSE @ GRADE
FROM FLOATING OIL SKIMMER
NOTE 10
SPARE SKIM CONN.
GLYCOL TRACED & INSULATED
NOTE 9
TO ATMOS.
EXPOSED LINE GLYCOL TRACED & INSULATED
NOTE 5
VOR'EX BREAKER
INTERNAL HEATER
NOTE 6
SPARGE RING
CONE BOTTOM
FROM FUTURE TANK
TO FUTURE TANK
VACUUM TRUCK CONN. WITH 8" INSULATION
NOTE 13
TO SINK
FLUSH CONNECTION
CORROSION TEST POINT
24"-AC-14-16081
12"-AC-14-16091
FUTURE PUMP CONNECTIONS
HLL START-UP
LLL SHUTDOWN
STOP
START/STOP
TIME DELAY ON START
SEAL FLUSH LINE
TO BASKET
PLANT AIR
14-15151
14-15152 (SPARE)
14-15166
SKIM OIL PUMP
50 GPM RATED
RATED ΔP = 20 PSI
14-15151 + 14-15152
OVERFLOW/DIRTY WATER RETURN PUMPS
450 GPM RATED
RATED ΔP = 50 PSI



12. PREFIX FOR INSTRUMENTS ON THIS P&ID IS 1448 EXCEPT AS NOTED.
13. TRUCK CONNECTION FURNISHED BY ARCO
14. DRAIN BALANCING LINE REGULARLY

NOTES

1. MINIMUM SURGE VOLUME ABOVE LLL SHALL BE 8 M'BBLS
2. CATHODIC PROTECTION SHALL BE PROVIDED TO THE OVERFLOW/DIRTY WATER TANK
3. ALL UNHOUSED INSTRUMENTS TO BE GLYCOL TRACED AND INSULATED
4. LOCATE 4'-0" ABOVE THE BOTTOM OF THE TANK. THE DIAPHRAM OF THE DIFFERENTIAL PRESSURE CELL TO BE FLUSH WITH TANK WALL FOR DIRTY WATER SERVICE.
5. SAMPLE POINTS TO BE LOCATED ONE EVERY 18" FROM GROUND LEVEL UP TO 18' VERTICALLY, ON THE SIDE OF THE TANK. VALVES TO BE LOCATED AT GRADE
6. INTERNAL HEATING COIL TO BE MADE OF TITANIUM
7. STAINLESS STEEL-GLYCOL TRACED-INSULATED LINES
8. PROVIDE 36" MANWAY, SIDE OF TANK, ENTRY THROUGH PUMP HOUSE.
9. 24' PGSV LOCATED ON TOP OF 36" MANWAY, TOP OF TANK.
10. 4" OIL SKIMMER NOZZLE AT LLL OF 5'-0".
11. TANK VENT LINE TO BE SELF DRAINING
12. TANK RERATED IN 1992 UNDER FCR 02537D

TABLE A

EQUIPMENT Nº HEAT TRACED		FLOW GAUGE	RESTRICTION ORIFICE
BLANKET GAS LINES 4"-A-14-14220 & 2"-A-4-1420		F28-6	R29-0
MANWAY VENT PGSV		F31-6	R32-0
VENT VALVES AND VENT LINES P7 SV		F34-3	R35-0
VENT VALVE AND VENT LINE P8 SV		F37-6	R38-0
EXPOSED BALANCING LINE TO FILTER FLUSH TANK		F40-8	R41-0
PRESSURE GAUGE TUBING PI		F43-3	R44-0

ARCO Oil and Gas Company
Division of AtlanticRichfieldCompany
NORTH SLOPE DISTRICT - ANCHORAGE

RMP
THE RALPH M. PARSONS COMPANY
PASADENA, CALIFORNIA

PIPING & INSTRUMENT DIAGRAM
OVERFLOW/DIRTY WATER TANK EWI
FLOW STATION #2 UNIT 14

REV	DATE	DESCRIPTION
6	6-23-88	REVISED PER ACE 005070 (9-15-88)
5		REVISED PER ASB 318 (6-8-84)
4	1-28-83	AS-BUILT PER ASB 22D
3		ISSUED FOR CONSTRUCTION UPDATE PER CHANGES 2-1 THRU 2-3
2		
1	6-9-81	ISSUED FOR CONSTRUCTION
15		AS-BUILT PER DCR 09581R

SCALE: NONE
6000-3304 MPE-144801 001 of 1 REV. 15