



Hilcorp Alaska, LLC

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Suite 1400
Anchorage, AK 99503

Phone: 907/777-8300
Fax: 907/777-8301

January 6, 2025

Alaska Department of Environmental Conservation
Air Permits Program
ATTN: Application Intake
555 Cordova Street
Anchorage, AK 99501

Subject: Hilcorp Alaska, LLC – Swanson River Field
Air Quality Operating Permit No. AQ0059TVP03, Rev. 2 Application for Renewal

Dear Application Intake:

Please find attached the Hilcorp Alaska, LLC (Hilcorp) application for renewal of Air Quality Operating Permit No. AQ0059TVP03, Revision 2 for Swanson River Field. Under Condition 79 of the permit, an application must be submitted no sooner than January 8, 2024 and no later than January 8, 2025. Hilcorp understands that submittal by the January 8, 2025 date represents a timely application consistent with 40 CFR 71.5(a)(1)(iii) and completeness will be evaluated by the Alaska Department of Environmental Conservation (ADEC) according to 40 CFR 71.5(a)(2).

Hilcorp believes that this submittal constitutes a complete air quality operating permit application according to the requirements of 40 CFR 71.5 and 18 AAC 50.326. Hilcorp will continue to comply with all applicable requirements with which Swanson River Field is in compliance. Hilcorp will meet new requirements that become effective during the permit term on a timely basis.

We appreciate the ADEC's efforts in processing this operating permit renewal application. Please contact Natalia Lau at (907) 777-8304 or natalia.lau@hilcorp.com with any questions or concerns.

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

Sincerely,

A handwritten signature in blue ink that reads "Chris Kanyer".

Chris Kanyer
Asset Team Lead
Hilcorp Alaska, LLC

Enclosure: Swanson River Field Air Quality Operating Permit Renewal Application

Alaska Department of Environmental Conservation
Air Permit Program – Attn: Application Intake
January 6, 2025
Page 2 of 2

cc: Electronic Copy
US EPA Region 10
M/S OAW 150
1200 Sixth Avenue, Suite 155
Seattle, WA, 98101

Natalia Lau, Hilcorp
Jeanette Brena, Boreal



Hilcorp Alaska, LLC

**Swanson River Field
Application for Renewal of an Air Quality
Operating Permit**

Prepared for:
Hilcorp Alaska, LLC

January 2025



B O R E A L

Swanson River Field

Application for Renewal of an Air Quality Operating Permit

Prepared for:

Hilcorp Alaska, LLC

3800 Centerpoint Dr., Suite 1400
Anchorage, AK 99503

Prepared by:

Boreal Environmental Services, Inc.

4300 B Street, Suite 510
Anchorage, AK 99503





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Operating Permit No. AQ0059TVP03, Rev. 2

Off Permit Change Notifications



Section A

Stationary Source

Form A1:	Stationary Source (General Information)
Form A4:	Title V Air Operating Permit Renewal Application Information
Attachment A-1:	Compliance Certification
Attachment A-2:	18 AAC 50.265 Requirements

FORM A1
Stationary Source (General Information)

GENERAL INFORMATION		
1. Permittee:		
Permittee Name: Hilcorp Alaska, LLC		
Mailing Address Line 1: 3800 Centerpoint Drive, Suite 1400		
Mailing Address Line 2		
City: Anchorage	State: AK	Zip Code: 99503
2. Stationary Source Name: Swanson River Field		
3. Stationary Source Physical Address:		
Physical Address Line 1: Kenai Peninsula, AK		
Physical Address Line 2		
City:	State: AK	Zip Code:
4. Location:	Latitude: 60° 43' 37" North	Longitude: 150° 52' 23" West
5. Primary SIC Code: 1311	SIC Code Description: Crude Petroleum and Natural Gas	Primary NAICS Code: 211111 – Crude Petroleum and Natural Gas Extraction
6. Current/Previous Title V Air Permit No.: AQ0059TVP03, Rev. 2		Expiration Date: July 8, 2025
7. Does this application contain confidential data? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
8. APPLICATION IS BEING MADE FOR:		
<input type="checkbox"/> Initial Title V Permit for this Stationary Source <input type="checkbox"/> Modify Title V Permit (currently permitted) <input checked="" type="checkbox"/> Title V Permit Renewal		
9. CONTACT INFORMATION (Attach additional sheets if needed)		
Owner:		Operator:
Name/Title: Hilcorp Alaska, LLC		Name/Title: Hilcorp Alaska, LLC
Mailing Address Line 1: 3800 Centerpoint Drive, Suite 1400		Mailing Address Line 1: 3800 Centerpoint Drive, Suite 1400
Mailing Address Line 2		Mailing Address Line 2
City: Anchorage	State: AK Zip Code: 99503	City: Anchorage State: AK Zip Code: 99503
Permittee's Responsible Official: See attached		Designated Agent:
Name/Title:		Name/Title: CT Corporation System
Mailing Address Line 1:		Mailing Address Line 1: 9360 Glacier Highway, Suite 202
Mailing Address Line 2		Mailing Address Line 2
City: Anchorage	State: AK Zip Code:	City: Juneau State: AK Zip Code: 99801
Stationary Source and Building Contact:		Fee Contact:
Name/Title: Natalia Lau / Environmental Specialist		Name/Title: Hilcorp Alaska, LLC Accounts Payable
Mailing Address Line 1: 3800 Centerpoint Drive, Suite 1400		Mailing Address Line 1: 3800 Centerpoint Drive, Suite 1400
Mailing Address Line 2		Mailing Address Line 2
City: Anchorage	State: AK Zip Code: 99503	City: Anchorage State: AK Zip Code: 99503
Phone: (907) 777-8304	Email: natalia.lau@hilcorp.com	Phone: Email:
Permit Contact:		Person or Firm that Prepared Application:
Name/Title: Natalia Lau / Environmental Specialist		Name/Title: Jeanette Brena, P.E. / Boreal Environmental Services
Mailing Address Line 1: 3800 Centerpoint Drive, Suite 1400		Mailing Address Line 1: 4300 B Street, Suite 510
Mailing Address Line 2		Mailing Address Line 2
City: Anchorage	State: AK Zip Code: 99503	City: Anchorage State: AK Zip Code: 99503
Phone: (907) 777-8304	Email: natalia.lau@hilcorp.com	Phone: (907) 227-5569 Email: jbrena@boreal-services.com
10. STATEMENT OF CERTIFICATION		
Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.		
Name of Responsible Official (typed): Chris Kanyer		Title: Asset Team Lead
<input checked="" type="checkbox"/> Signature (blue ink):		Date: 1/6/2025

FORM A1
Stationary Source (General Information)

9. Contact Information

Permittee's Responsible Officials:

- 1) Luke Saugier
Title: Senior Vice President
Address: 3800 Centerpoint Drive, Suite 1400, Anchorage, AK, 99503

- 2) Trudi Hallett
Title: Asset Team Lead
Address: 3800 Centerpoint Drive, Suite 1400, Anchorage, AK, 99503

- 3) Chris Kanyer
Title: Asset Team Lead
Address: 3800 Centerpoint Drive, Suite 1400, Anchorage, AK, 99503

- 4) Anthony McConkey
Title: Asset Team Lead
Address: 3800 Centerpoint Drive, Suite 1400, Anchorage, AK, 99503

- 5) Jill Fisk
Title: Asset Team Lead
Address: 3800 Centerpoint Drive, Suite 1400, Anchorage, AK, 99503

FORM A4
Title V Air Operating Permit Renewal Application Information

Permit Number: AQ0059TVP03, Rev. 2

1.	Permit Contact: Name	Natalia Lau
	Title	Environmental Specialist
	Mailing Address Line 1	3800 Centerpoint Dr. Suite 1400
	Mailing Address Line 2	Anchorage, AK 99503
	Phone Number	(907) 777-8404
	Email	natalia.lau@hilcorp.com
2.	Were there any changes to stationary source General Information (Form A1)? If yes, complete and submit a Form A1.	Yes, see attached Form A1.
3.	Were there any changes to the stationary source description (Form A2)? If yes, complete and submit a Form A2.	No.
4.	Were there any off-permit changes? Reference any notifications provided to the Department, and attach copies of the notifications.	Yes, see attached off permit change notifications submitted on 7/18/23 and 10/18/23.
	If yes, integrate changes into renewal permit? [if no, explain]	Yes.
5.	Have any Alaska Title I permits been issued to the stationary source since the most recent Title V permit or revision issuance?	No.
	If yes, integrate changes into renewal permit? [If yes, please list. If no, explain]	N/A
6.	Will there be any changes to the operating scenario(s)? [if yes, describe and attach Form A3]	No.
7.	Will there be any new, modified, or reconstructed emission units or air pollution control equipment? [if yes, attach appropriate forms from Form Series B, C, D, and E]	Yes, see attached Form B and off permit change notifications submitted on 7/18/23 and 10/18/23.
8.	Are the current emissions units correctly identified and defined in the permit? [if no, attach appropriate forms from Form Series B, C, D, and E]	No, see attached Form B.
9.	Does the CAM rule [40 CFR Part 64] apply to any of the emissions units? [if yes, review the guidance provided for CAM in the Form A4 instructions for this item]	No.
10.	Does the accidental release prevention regulation [40 CFR Part 68] apply to the facility? [if yes, provide the appropriate regulatory applicability document in detail.]	Yes, see Condition 38 of Permit No. AQ0059TVP03, Rev. 2.
11.	Are there any other new applicable requirements? [if yes, list the new applicable requirements, emissions units, and attach the appropriate Series E Form]	Yes, 40 CFR 60 Subpart OOOOb is applicable; see attached Form E3.

FORM A4
Title V Air Operating Permit Renewal Application Information

	Are there any requested changes in the assessable potential to emit other than those identified in item 9 above? [if yes, answer the following]	Yes, see attached D Forms.
12.	Are the changes a result of having better emissions information such as a new emission factor from a recent source test? [if yes, complete and attach any applicable emissions forms from Series D. Attach additional information as necessary to fully document.]	No.
	Are the changes due to an increase in production? [if yes, complete and attach the applicable emissions form from Series D. Attach additional information as necessary to fully document.]	No.
13.	Is the stationary source in compliance with all of the conditions of the current permit? If yes, attach a compliance certification. If no, attach a compliance schedule and/or actions taken for any out-of-compliance emission units.	Yes, see attached compliance certification. Hilcorp will continue to comply with all applicable requirements with which Hilcorp is in compliance. Hilcorp will meet new requirements that become effective during the permit term on a timely basis.
14.	Are there any requested changes to testing and/or monitoring conditions? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	Yes, see attached Form E3.
15.	Are there any requested changes to monitoring conditions other than those being replaced by CAM? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	No.
16.	Are there any requested changes to recordkeeping conditions? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	Yes, see attached Form E3.
17.	Are there any requested changes to reporting conditions? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	Yes, see attached Form E3.
18.	Are there any requested changes to the non-applicable requirements (i.e. permit shield)? [if yes, identify the emission unit, the requested change, and the reason in the appropriate Series B and/or D form. If the change applies stationary source-wide, complete the appropriate Series E form. Attach additional information as necessary to fully document.]	Yes, see attached Forms B and E4.

FORM A4
Title V Air Operating Permit Renewal Application Information

19.	Are there any other requested changes to any condition? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	Yes, see attached Form E3.
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Statement of Certification:

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

Chris Kanyer
Name of Responsible Official

Asset Team Lead
Title


Signature (blue ink)

1/6/25
Date

Attachment A-1: Compliance Certification
Swanson River Field Operating Permit No. AQ0059TVP03, Rev. 2
Title V Renewal Application

Permit Condition		Compliance Status	Method Used to Determine Status
No.	Summary/Description		[40 CFR 71.5(c)(9)]
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, 8 through 14, 23, 23A, 24 through 33, 36, 37, 40, 41, 42a, and 43 listed in Table A and boilers, heaters, and flares in Section 12 to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	In Compliance	Record Review and Field Verification/Interview
	1.1. For each boiler and heater listed in Section 12, as long as actual emissions from the emissions unit are less than the significant emissions thresholds listed in 18 AAC 50.326(e) during any consecutive 12-month period, monitoring shall consist of an annual compliance certification under Condition 73 with the visible emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 72 if any boiler or heater listed in Section 12 reaches any of the significant emissions thresholds listed in 18 AAC 50.326(e) and monitor, record, and report in accordance with Conditions 3 through 5 for the remainder of the permit term for that emissions unit.	In Compliance	Records Review
	1.2. For EU IDs 1, 8 through 14, 23, 23A, 42a, and 43, burn only gas as fuel. In each operating report under Condition 72, indicate whether each of these emissions units burned only gas during the period covered by the report. Report under Condition 71 if any fuel other than gas is burned in any of these emissions units.	In Compliance	Record Review and Field Verification/Interview
	1.3. For EU IDs 24 through 33 and flares listed in Section 12, monitor, record, and report in accordance with Condition 6.	In Compliance	Records Review
	1.4. For each of EU IDs 40 and 41, monitoring shall consist of an annual compliance certification under Condition 73 for the visible emissions standard based on reasonable inquiry.		
2	Incinerator Visible Emissions. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, through the exhaust of EU ID 2, to reduce visibility by more than 20 percent averaged over any six consecutive minutes. 2.1. Observe emissions for 18 consecutive minutes to obtain a minimum of 72 observations in accordance with Method 9 of 40 CFR 60, Appendix A, at least once every 12 calendar months. If the incinerator is not operated during this period, observe emissions the next time the unit operates. 2.2. Record and report in accordance with Conditions 4.1.a through 5.2.a. 2.3. If any monitoring under Condition 2.1 was not performed, report under Condition 71 within three days of the date the monitoring was required.	In Compliance	Records Review
Visible Emissions Monitoring, Recordkeeping, and Reporting (MR&R)			
3	Visible Emissions Monitoring. When required by Condition 1.1, the Permittee shall observe the exhaust of the boilers and heaters in Section 12 for visible emissions using the Method 9 Plan under Condition 3.2. 3.1. The Permittee may, for each unit, elect to continue the visible emissions monitoring schedule specified in Conditions 3.2.b through 3.2.e that remains in effect from a previous permit. 3.2 Method 9 Plan. For all observations in this plan, observe the emissions unit exhaust following 40 CFR 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations. a. <u>First Method 9 Observation.</u> Except as provided in Condition 3.1, observe the exhaust(s) of each boiler and heater listed in Section 12 according to the following criteria: (i) For each boiler and heater in Section 12, observe the exhaust of the emissions unit within 30 days after the end of the calendar month during which monitoring was triggered under Condition 1.1; or for an emissions unit with intermittent operations, within the first 30 days during the unit's next scheduled operation. b. <u>Monthly Method 9 Observations.</u> After the first Method 9 observation conducted under Condition 3.2.a, perform observations at least once in each calendar month that an emissions unit operates. c. <u>Semiannual Method 9 Observations.</u> After at least three monthly observations under Condition 3.2.b, unless a six-consecutive-minute average opacity is greater than 15 percent and one or more individual observations are greater than 20 percent, perform semiannual observations (i) no later than seven months, but not earlier than five months, after the preceding observation; or (ii) for an emission unit with intermittent operations, during the next scheduled operation immediately following seven months after the preceding observation. d. <u>Annual Method 9 Observations.</u> After at least two semiannual observations under Condition 3.2.c, unless a six-consecutive-minute average opacity is greater than 15 percent and one or more individual observations are greater than 20 percent, perform annual observations: (i) no later than 12 months, but not earlier than 10 months, after the preceding observation; or (ii) for an emissions unit with intermittent operations, during the next scheduled operation immediately following 14 months after the preceding observation e. <u>Increased Method 9 Frequency.</u> If a six-consecutive-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more individual observations are greater than 20 percent, then increase or maintain the observation frequency for that emissions unit to at least monthly intervals as described in Condition 3.2.b, and continue monitoring in accordance with the Method 9 Plan.	In Compliance	Records Review

Attachment A-1: Compliance Certification
Swanson River Field Operating Permit No. AQ0059TVP03, Rev. 2
Title V Renewal Application

Permit Condition		Compliance Status	Method Used to Determine Status
No.	Summary/Description		[40 CFR 71.5(c)(9)]
4	Visible Emissions Recordkeeping. The Permittee shall keep records as follows: 4.1. For all Method 9 Plan observations, a. the observer shall record the following: (i) the name of the stationary source, emission unit and location, emission unit type, observer's name and affiliation, and the date on the Visible Emission Observation Form in Section 13; (ii) the time, estimated distance to the emissions location, sun location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate or best estimate if unknown) on the sheet at the time opacity observations are initiated and completed; (iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made; (iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emission Observation Form in Section 13, and (v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.	In Compliance	Records Review
	b. To determine the six-consecutive-minute average opacity, (i) divide the observations recorded on the record sheet into sets of 24 consecutive observations; (ii) sets need not be consecutive in time and in no case shall two sets overlap; (iii) for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; and (iv) record the average opacity on the sheet. c. Calculate and record the highest six-consecutive- and 18-consecutive-minute average opacities observed. 4.2. The records required by Condition 4.1 may be kept in electronic format.	In Compliance	Records Review
	Visible Emissions Reporting. The Permittee shall report as follows: 5.1. Include in each operating report required under Condition 72 for the period covered by the report: a. for all Method 9 Plan observations, (i) copies of the observation results (i.e., opacity observations) for each emissions unit, except for the observations the Permittee has already supplied to the Department; and (ii) a summary to include: (A) number of days observations were made; (B) highest six-consecutive- and 18-consecutive-minute average opacities observed; and (C) dates when one or more observed six-consecutive-minute average opacities were greater than 20 percent; and (iii) a summary of any monitoring or recordkeeping required under Conditions 3 and 4 that was not done.	In Compliance	Records Review
5	5.2. Report under Condition 71: a. the results of Method 9 observations that exceed 20 percent average opacity for any six-consecutive-minute period; and b. if any monitoring under Condition 3 was not performed when required, report within three days of the date the monitoring was required.	In Compliance	Records Review
	Visible Emissions MR&R. The Permittee shall monitor, record, and report as follows: 6.1. Observe flare events on EU IDs 24 through 33 and test flares listed in Section 12 for visible emissions following 40 CFR 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations according to the following schedule: a. If a visible emission observation has not been previously conducted on any of EU IDs 24 through 33 and test flares listed in Section 12, the Permittee shall observe one daylight flare event within 12 months of the effective date of this permit. b. Conduct subsequent visible emissions observations within 14 months of, but not earlier than three months after, the preceding flare event visible emissions observation. c. If there are no flare events that meet the requirements of Condition 6.1.a or 6.1.b, the Permittee shall observe the next daylight flare event.	In Compliance	Records Review
6	6.2. Record the following information for each observed flare event: a. flare EU ID number; b. results of the Method 9 observations; c. reason for flaring; d. date, beginning and ending time of event; and e. volume of gas flared. 6.3. The records required by Condition 6.2 may be kept in electronic format. 6.4. Monitoring of a flare event may be postponed for safety or weather reasons, or because a qualified observer is not available.	In Compliance	Records Review
	6.5. Include the following in the operating report required by Condition 72 for the period covered by the report: a. copies of the records required by Condition 6.2; and b. if an annual flare event observation required by Condition 6.1.a or Condition 6.1.b has not been fulfilled for the year and/or monitoring of a flare event is postponed, an explanation of the reason the event was not monitored. 6.6. Report under Condition 71 whenever the opacity standard in Condition 1 is exceeded. a. whenever the visible emissions standard in Condition 1 is exceeded; or b. the monitoring required under Condition 6.1 is not completed, except as allowed under Condition 6.4. 6.7. If no flare events are monitored during a certification period, the Permittee shall certify compliance under Condition 73 with the visible emissions standard in Condition 1 based on reasonable inquiry.	In Compliance	Records Review

Attachment A-1: Compliance Certification
Swanson River Field Operating Permit No. AQ0059TVP03, Rev. 2
Title V Renewal Application

Permit Condition		Compliance Status	Method Used to Determine Status
No.	Summary/Description		[40 CFR 71.5(c)(9)]
Particulate Matter (PM) Emissions Standards			
7	<p>Industrial Process and Fuel-Burning Equipment PM. The Permittee shall not cause or allow particulate matter emitted from EU IDs 1, 8 through 14, 23, 23A, 24 through 33, 36, 37, 40, 41, 42a, and 43 listed in Table A and boilers, heaters, and flares in Section 12 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.</p> <p>7.1. For each boiler and heater listed in Section 12, as long as actual emissions from the emissions unit are less than the significant emissions thresholds listed in 18 AAC 50.326(e) during any consecutive 12-month period, monitoring shall consist of an annual compliance certification under Condition 73 for the PM emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 72 if any boiler or heater listed in Section 12 reaches any of the significant emissions thresholds and monitor, record, and report in accordance with Conditions 8 through 10 for the remainder of the permit term for that emissions unit.</p> <p>7.2. For EU IDs 1, 8 through 14, 23, 23A, 42a, and 43, the Permittee shall comply with Condition 1.2.</p> <p>7.3. For EU IDs 24 through 33 listed in Table A and test flares listed in Section 12, the Permittee shall comply with Condition 6.</p> <p>7.4. For EU IDs 40 and 41, the Permittee must annually certify compliance under Condition 73 for the PM standard based on reasonable inquiry.</p>	In Compliance	Record Review and Field Verification/Interview
		In Compliance	Record Review and Field Verification/Interview
PM MR&R			
8	<p>PM Monitoring. The Permittee shall conduct source tests on the boilers and heaters listed in Section 12 to determine the concentration of PM in the exhaust of each of the emissions units as follows:</p> <p>8.1. If the result of any Method 9 observation conducted under Condition 3.2 for any boiler or heater listed in Section 12 results in an 18-minute average opacity greater than 20 percent opacity, the Permittee shall, within six months of that Method 9 observation, either:</p> <p>a. take corrective action and observe the emissions unit exhaust under load conditions comparable to those when the criteria were exceeded, following 40 CFR 60, Appendix A-4 Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations, to show that emissions are no longer greater than an 18-minute average opacity of 20 percent; or</p> <p>b. except as exempted under Condition 8.3, conduct a PM source test according to the requirements in Section 6.</p> <p>8.2. During each one-hour PM source test run under Condition 8.1, observe the emissions unit exhaust for 60 minutes in accordance with Method 9 and calculate the highest 18-consecutive-minute average opacity measured during each one-hour test run. Submit a copy of these observations with the source test report.</p> <p>8.3. The PM source test requirement in Condition 8.1 is waived for an emission unit if:</p> <p>a. a source test on that unit has shown compliance with the PM standard during this permit term, or</p> <p>b. corrective action was taken to reduce visible emissions and two consecutive 18-minute Method 9 visible emissions observations (as described in Condition 3.2) conducted thereafter within a six-month period show visible emissions less than the threshold in Condition 8.1.</p>	In Compliance	Records Review
9	<p>PM Recordkeeping. The Permittee shall keep records of the results of any source test and visible emissions observations conducted under Condition 8.</p>	In Compliance	Records Review
10	<p>PM Reporting. The Permittee shall report as follows:</p> <p>10.1. Notify the Department of any Method 9 observation results that are greater than the threshold of Condition 8.1 within 30 days of the end of the month in which the observations occurred. Include the dates, EU ID(s), and results when an observed 18-minute average opacity was greater than the threshold in Condition 8.1.</p> <p>10.2. In each operating report required by Condition 72, include:</p> <p>a. a summary of the results of any source test and visible emissions observations conducted under Condition 8; and</p> <p>b. copies of any visible emissions observation results greater than the threshold in Condition 8.1, if they were not already submitted.</p> <p>10.3. Report in accordance with Condition 71 any time the results of a source test exceed the PM emission standard in Condition 7.</p>	In Compliance	Records Review
Sulfur Compound Emission Standard			
11	<p>Sulfur Compound Emissions. In accordance with 18 AAC 50.055(c), the Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from EU IDs 1, 8 through 14, 23, 23A, 24 through 33, 36, 37, 40, 41, 42a, and 43, and boilers, heaters, and flares in Section 12 to exceed 500 ppm averaged over three hours.</p>	In Compliance	Records Review

Attachment A-1: Compliance Certification
Swanson River Field Operating Permit No. AQ0059TVP03, Rev. 2
Title V Renewal Application

Permit Condition		Compliance Status	Method Used to Determine Status
No.	Summary/Description		[40 CFR 71.5(c)(9)]
Sulfur Compound MR&R			
12	Sulfur Compound Emissions Monitoring and Recordkeeping. The Permittee shall monitor and keep records, as follows: 12.1. Comply with either Condition 12.1.a or Condition 12.1.b: a. For each shipment of fuel: (i) If the fuel grade requires a sulfur content 0.5 percent by weight (wt% S_{fuel}) or less, keep receipts that specify fuel grade and amount; or (ii) If the fuel grade does not require a sulfur content 0.5 wt% S_{fuel} or less, keep receipts that specify fuel grade and amount, and (A) test the fuel for sulfur content; or (B) obtain test results showing the sulfur content of the fuel from the supplier or refinery; the test results must include a statement signed by the supplier or refinery of what fuel they represent; or b. Test the sulfur content of the fuel in each storage tank that supplies fuel to EU IDs 40 and 41 and boilers and heaters listed in Section 12 at least monthly. 12.2. Fuel testing under Condition 12.1.a or Condition 12.1.b must follow an appropriate method listed in 18 AAC 50.035(b)-(c) or 40 CFR 60.17 incorporated by reference in 18 AAC 50.040(a)(1). 12.3. If a shipment of fuel contains greater than 0.75 wt% S_{fuel} or if the results of a fuel sulfur content test indicate that the fuel contains greater than 0.75 wt% S_{fuel} , the Permittee shall calculate SO ₂ emissions in parts per million (ppm) using either the SO ₂ material balance calculation in Section 14 or Method 19 of 40 CFR 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a)(3).	In Compliance	Records Review
13	Sulfur Compound Emissions Reporting. The Permittee shall report as follows: 13.1. If SO ₂ emissions calculated under Condition 12.3 exceed 500 ppm, the Permittee shall report in accordance with Condition 71. When reporting under this condition, include the calculation under Condition 12.3. 13.2. The Permittee shall include in the operating report required by Condition 72 for each month covered by the report: a. a list of the fuel grades received at the stationary source; b. for any fuel received with a fuel sulfur content greater than 0.5 wt% S_{fuel} , the fuel sulfur content of the shipment; c. the results of all fuel sulfur analyses conducted under Condition 12.1.a or Condition 12.1.b and documentation of the method(s) used to complete the analyses; and d. for any fuel received with a sulfur content greater than 0.75 wt% S_{fuel} , the SO ₂ emissions in ppm calculated under Condition 12.3.	In Compliance	Records Review
14	Sulfur Compound Emissions Monitoring. The Permittee shall analyze a representative sample of the gas fuel at least annually to determine the total 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 CFR 60.17 incorporated by reference in 18 AAC 50.040(a)(1).	In Compliance	Records Review
15	Sulfur Compound Emissions Recordkeeping. Keep records of the sulfur content analysis required under Condition 14.	In Compliance	Records Review
16	Sulfur Compound Emissions Reporting. The Permittee shall: a. Report as excess emissions, in accordance with Condition 71, whenever the gas fuel combusted causes sulfur compound emissions to exceed the standard of Condition 11. b. Include copies of the records required by Condition 15 with the operating report required by Condition 72 for the period covered by the report.	In Compliance	Records Review
Pre-Construction Permit Requirements			
17	For any equipment listed in Section 12 and any substitute equipment allowed under Condition 24, the Permittee shall not burn any diesel fuel with a sulfur content greater than 0.5%. 17.1. The Permittee shall: a. Monitor and keep records in accordance with Conditions 12.1 and 12.2. b. Report in accordance with Conditions 13.2.a and 13.2.b. c. Report in accordance with Condition 71 whenever the sulfur content of the fuel combusted in any equipment listed in Section 12 or any substitute equipment allowed under Condition 24 is greater than 0.5%.	In Compliance	Records Review
18	Limit on Hours of Operation for EU IDs 40 and 41. The Permittee shall limit the operation of EU IDs 40 and 41 to no more than 500 hours each in any consecutive 12-month period. 18.1. The Permittee shall monitor and record the monthly hours of operation of EU IDs 40 and 41. 18.2. In the operating report required by Condition 72, report the monthly hours of operation and consecutive 12-month rolling total hours of operation of EU IDs 40 and 41 for each month of the reporting period. 18.3. Report under Condition 71 whenever a limit in Condition 18 is exceeded.	In Compliance	Records Review
19	Limits on Hours of Operation for EU IDs 23 and 23A. The Permittee shall limit the operation of EU IDs 23 and 23A to 100 hours each in any consecutive 12-month period. 19.1. The Permittee shall monitor and record the monthly hours of operation of EU IDs 23 and 23A. 19.2. In the operating report required by Condition 72, report the monthly hours of operation and consecutive 12-month rolling total hours of operation of EU IDs 23 and 23A during each month of the reporting period. 19.3. Report under Condition 71 whenever a limit in Condition 19 is exceeded.	In Compliance	Records Review
20	Limits on Hours of Operation for EU IDs 12 through 14. The Permittee shall limit the cumulative hours of operation of EU IDs 12, 13 and 14 to 17,520 hours in any consecutive 12-month period. 20.1. The Permittee shall monitor and record the monthly hours of operation of EU IDs 12 through 14. 20.2. In the operating report required by Condition 72, report the monthly hours of operation and consecutive 12-month rolling total hours of operation of EU IDs 12 through 14 during each month of the reporting period. 20.3. Report under Condition 71 whenever a limit in Condition 20 is exceeded.	In Compliance	Records Review

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21	Limit on Throughput for EU ID 2. The Permittee shall limit the mass of waste loaded to EU ID 2 to 300,000 pounds in any consecutive 12-month period. 21.1. The Permittee shall monitor and record the monthly mass of waste loaded to EU ID 2. 21.2. In the operating report required by Condition 72, report the monthly mass and consecutive 12-month rolling total mass of waste loaded to EU ID 2 during each month of the reporting period. 21.3. Report under Condition 71 whenever the limit in Condition 21 is exceeded.	In Compliance	Records Review
22	Drilling Site Restrictions. The Permittee shall limit the drilling and well testing operations to no more than 24 months per drill site within the Swanson River Field. Extension beyond this time frame will require Department approval. 22.1. Monitor, record, and report in accordance with Condition 23.	In Compliance	Field Verification/Interview
23	Relocation of Drilling Rig. The Permittee shall notify the Department prior to moving a drilling rig onto, or in, the Swanson River Field. Use the form in Section 11 to make this notification.	In Compliance	Field Verification/Interview
24	Operating Limits. The Permittee shall use a drilling rig drawn from the pool of rigs identified in Section 12 of the permit. The source inventory of each of these rigs is detailed in Section 12, subject to change as allowed by the Relocation Notification Form in Section 11. The Permittee may substitute equipment provided the overall rated power capacity of the rig does not exceed that of the Nabors 160 rig.	In Compliance	Field Verification/Interview
25	Rig Engines, Boilers, and Heaters. The Permittee shall limit the hours of operation for each emission unit listed by drilling rig in Section 12 (except flares) to 2,160 hours per year per drill site, on a 12-month rolling basis. This operational limit shall apply to any rig used. 25.1. The Permittee shall monitor and record the monthly and consecutive 12-month rolling hours of operation for each emission unit listed by rig in Section 12 for the rig used at each site.	In Compliance	Field Verification/Interview
	25.2. Report the monthly and consecutive 12-month rolling hours of operation for each emission unit listed by rig in Section 12 used at each site in accordance with Condition 72.	In Compliance	Records Review
	25.3. Notify the Department per Condition 71 should the 12-month rolling hours of operation for any emission unit used at each site exceed a limit in Condition 25.	In Compliance	Records Review
26	Rig Test Flare. The Permittee shall limit the operation of the rig test flare(s) listed in Section 12 to 30 MMscf per day per drill site. 26.1. The Permittee shall monitor and record the daily volume of gas flared at each site. 26.2. Notify the Department per Condition 71 should the volume of gas flared on any day at any drill site exceed the limit in Condition 26.	In Compliance	Records Review
Insignificant Emission Units			
27	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: 27.1. VE Standard: The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from an industrial process, fuel-burning equipment, or an incinerator to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes. 27.2. 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. 27.3. 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.	In Compliance	Record Review and Field Verification/Interview
	27.4. General MR&R for Insignificant Emission Units. The Permittee shall comply with the following: a. Submit the compliance certifications of Condition 73 based on reasonable inquiry; b. Comply with the requirements of Condition 54; and c. Report in the operating report required by Condition 72 if an emissions unit has historically been classified as insignificant because of actual emissions less than the thresholds of 18 AAC 50.326(e) and current actual emissions have become greater than any of those thresholds. d. No other monitoring, recordkeeping or reporting is required for insignificant emissions units to demonstrate compliance with the emissions standards under Conditions 27.1, 27.2, and 27.3.	In Compliance	Records Review
Section 4. Federal Requirements			
40 CFR 60 Subpart A			
28	New Source Performance Standards (NSPS) Subpart A Notification. For any existing facility regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Administrator written notification or, if acceptable to both the Administrator and the Permittee, electronic notification, as follows: 28.1. A notification of any proposed replacement of components of an existing facility, for which the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, postmarked as soon as practicable, but no less than 60 days before commencement of replacement, and including the following information: a. the name and address of owner or operator, b. the location of the existing facility, c. a brief description of the existing facility and the components that are to be replaced, d. a description of the existing and proposed air pollution control equipment, e. an estimate of the fixed capital cost of the replacements, and of constructing a comparable entirely new facility, f. the estimated life of the existing facility after the replacements, and g. a discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.	In Compliance	Records Review

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No.	Summary/Description		
29	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 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.	In Compliance	Records Review
40 CFR 60 Subpart JJJJ			
30	For EU ID 43, comply with the following applicable requirements of NSPS Subpart JJJJ. 30.1. Comply with the following emission standards: a. NOx + HC: 10 g/hp-hr b. CO: 387 g/hp-hr 30.2. Owners and operators of stationary spark ignition (SI) internal combustion engines (ICE) must operate and maintain stationary SI ICE that achieve the emission standards as required in Condition 30.1 over the entire life of the engine. 30.3. You must install a non-resettable hour meter upon startup of your emergency engine. 30.4. If you must comply with the emission standards specified in Condition 30.1, you must demonstrate compliance according to one of the methods specified in Conditions 30.4.a and 30.4.b. a. Purchasing an engine certified according to procedures specified in NSPS Subpart JJJJ, for the same model year and demonstrating compliance according to one of the methods specified in Conditions 30.4.a(i) and 30.4.a(ii). (i) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance. (ii) If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to 40 CFR 60.4243(a)(2)(i). b. Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in Condition 30.1 and according to the requirements specified in §60.4244, as applicable, and according to Condition 30.4.b(i). (i) You must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance. 30.5. You must operate the emergency stationary ICE according to the requirements in Conditions 30.5.a through 30.5.c. In order for the engine to be considered an emergency stationary ICE under NSPS Subpart JJJJ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in Conditions 30.5.a through 30.5.c, is prohibited. If you do not operate the engine according to the requirements in Conditions 30.5.a through 30.5.c, the engine will not be considered an emergency engine under NSPS Subpart JJJJ and must meet all requirements for non-emergency engines. a. There is no time limit on the use of emergency stationary ICE in emergency situations. b. You may operate your emergency stationary ICE for the purposes specified in Condition 30.5.b(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition 30.5.c counts as part of the 100 hours per calendar year allowed by this paragraph. (i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator 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 owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. c. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in Condition 30.5.b. 30.6. Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in 40 CFR 60.4244(a) through (f). 30.7. Owners and operators of all stationary SI ICE must keep records of the information in Conditions 30.7.a through 30.7.d. a. All notifications submitted to comply with NSPS Subpart JJJJ and all documentation supporting any notification. b. Maintenance conducted on the engine. c. If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable. d. If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to Condition 30.4.a(ii), documentation that the engine meets the emission standards. 30.8. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.	In Compliance	Records Review
		In Compliance	Records Review
		In Compliance	Records Review

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40 CFR 60 Subpart OOOOa			
31	<p>The Permittee shall comply with the following applicable requirements in 40 CFR 60 Subpart OOOOa for those pads that have triggered applicability under Subpart OOOOa.</p> <p>31.1. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall maintain and operate any affected facility 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 inspection of the source. The provisions for exemption from compliance during periods of startup, shutdown and malfunctions provided for in 40 CFR 60.8(c) do not apply to NSPS Subpart OOOOa.</p> <p>31.2. For the collection of fugitive emissions components at a well site, as defined in 40 CFR 60.5430a, you must reduce GHG (in the form of a limitation on emissions of methane) and VOC emissions by complying with the requirements of Conditions 31.2.a through 31.2.j.</p> <p>a. You must monitor all fugitive emission components, as defined in 40 CFR 60.5430a, in accordance with Conditions 31.2.b through 31.2.g. You must repair all sources of fugitive emissions in accordance with Condition 31.2.h. You must keep records in accordance with Condition 31.2.i and report in accordance with Condition 31.2.j. For purposes of this section, fugitive emissions are defined as: Any visible emission from a fugitive emissions component observed using optical gas imaging or an instrument reading of 500 ppm or greater using Method 21.</p> <p>b. You must develop an emissions monitoring plan that covers the collection of fugitive emissions components at well sites within each company-defined area in accordance with Conditions 31.2.c and 31.2.d.</p>	In Compliance	Records Review
	<p>c. Fugitive emissions monitoring plans must include the elements specified in Conditions 31.2.c(i) through 31.2.c(viii), at a minimum.</p> <p>(i) Frequency for conducting surveys. Surveys must be conducted at least as frequently as required by Conditions 31.2.f and 31.2.g.</p> <p>(ii) Technique for determining fugitive emissions (i.e., Method 21 at 40 CFR part 60, appendix A-7, or optical gas imaging).</p> <p>(iii) Manufacturer and model number of fugitive emissions detection equipment to be used.</p> <p>(iv) Procedures and timeframes for identifying and repairing fugitive emissions components from which fugitive emissions are detected, including timeframes for fugitive emission components that are unsafe to repair. Your repair schedule must meet the requirements of Condition 31.2.h at a minimum.</p> <p>(v) Procedures and timeframes for verifying fugitive emission component repairs.</p> <p>(vi) Records that will be kept and the length of time records will be kept.</p> <p>(vii) If you are using optical gas imaging, your plan must also include the elements specified in 40 CFR 60.5397a(c)(7)(i) through (vii).</p> <p>(viii) If you are using Method 21 of appendix A-7 of 40 CFR 60, your plan must also include the elements specified in 40 CFR 60.5397a(c)(8)(i) and (ii). For the purposes of complying with the fugitive emissions monitoring program using Method 21 a fugitive emission is defined as an instrument reading of 500 ppm or greater.</p>	In Compliance	Records Review
	<p>d. Each fugitive emissions monitoring plan must include the elements specified in Conditions 31.2.d(i) through 31.2.d(iv), at a minimum, as applicable.</p> <p>(i) Sitemap.</p> <p>(ii) A defined observation path that ensures that all fugitive emissions components are within sight of the path. The observation path must account for interferences.</p> <p>(iii) If you are using Method 21, your plan must also include a list of fugitive emissions components to be monitored and method for determining location of fugitive emissions components to be monitored in the field (e.g., tagging, identification on a process and instrumentation diagram, etc.).</p> <p>(iv) Your plan must also include the written plan developed for all of the fugitive emission components designated as difficult-to-monitor in accordance with 40 CFR 60.5397a(g)(3)(i), and the written plan for fugitive emission components designated as unsafe-to-monitor in accordance with 40 CFR 60.5397a(g)(3)(ii).</p> <p>e. Each monitoring survey shall observe each fugitive emissions component, as defined in 40 CFR 60.5430a, for fugitive emissions.</p> <p>f. For a modified collection of fugitive emissions components at a well site, the initial monitoring survey must be conducted within 60 days of the first day of production for each collection of fugitive emission components after the modification.</p>	In Compliance	Records Review
	<p>g. A monitoring survey of each collection of fugitive emissions components at a well site must be performed at the frequencies specified in Condition 31.2.g(i), with the exceptions noted in Conditions 31.2.g(ii) and 31.2.g(iii).</p> <p>(i) Except as provided herein, a monitoring survey of each collection of fugitive emissions components at a well site within a company-defined area must be conducted at least semiannually after the initial survey. Consecutive semiannual monitoring surveys must be conducted at least 4 months apart.</p> <p>(ii) Fugitive emissions components that cannot be monitored without elevating the monitoring personnel more than 2 meters above the surface may be designated as difficult-to-monitor. Fugitive emissions components that are designated difficult-to-monitor must meet the specifications of 40 CFR 60.5397a(g)(3)(i) through (iv).</p> <p>(iii) Fugitive emissions components that cannot be monitored because monitoring personnel would be exposed to immediate danger while conducting a monitoring survey may be designated as unsafe-to-monitor. Fugitive emissions components that are designated unsafe-to-monitor must meet the specifications of 40 CFR 60.5397a(g)(4)(i) through (iv).</p>	In Compliance	Records Review

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31	<p>h. Each identified source of fugitive emissions shall be repaired or replaced in accordance with Conditions 31.2.h(i) and 31.2.h(ii).</p> <p>(i) Each identified source of fugitive emissions shall be repaired or replaced as soon as practicable, but no later than 30 calendar days after detection of the fugitive emissions.</p> <p>(ii) If the repair or replacement is technically infeasible, would require a vent blowdown, a compressor station shutdown, a well shutdown or well shut-in, or would be unsafe to repair during operation of the unit, the repair or replacement must be completed during the next scheduled compressor station shutdown, well shutdown, well shut-in, after a planned vent blowdown or within 2 years, whichever is earlier.</p> <p>(iii) Each repaired or replaced fugitive emissions component must be resurveyed as soon as practicable, but no later than 30 days after being repaired, to ensure that there are no fugitive emissions.</p> <p>(A) For repairs that cannot be made during the monitoring survey when the fugitive emissions are initially found, the operator may resurvey the repaired fugitive emissions components using either Method 21 or optical gas imaging within 30 days of finding such fugitive emissions.</p> <p>(B) For each repair that cannot be made during the monitoring survey when the fugitive emissions are initially found, a digital photograph must be taken of that component, or the component must be tagged for identification purposes. The digital photograph must include the date that the photograph was taken, must clearly identify the component by location within the site (e.g., the latitude and longitude of the component or by other descriptive landmarks visible in the picture).</p> <p>(C) Operators that use Method 21 to resurvey the repaired fugitive emissions components are subject to the resurvey provisions specified in 40 CFR 60.5397a(h)(3)(iii)(A) and (B).</p> <p>(D) Operators that use optical gas imaging to resurvey the repaired fugitive emissions components, are subject to the resurvey provisions specified in 40 CFR 60.5397a(h)(3)(iv)(A) and (B).</p> <p>i. Records for each monitoring survey shall be maintained as specified Condition 31.5.a.</p>	In Compliance	Records Review
	<p>j. Annual reports shall be submitted for each collection of fugitive emissions components at a well site that include the information specified in Condition 31.4.b. Multiple collection of fugitive emissions components at a well site may be included in a single annual report.</p>		
	<p>31.3. For each collection of fugitive emissions components at a well site, you must demonstrate continuous compliance with the fugitive emission standards specified in Condition 31.2 according to Conditions 31.3.a through 31.3.d.</p> <p>a. You must conduct periodic monitoring surveys as required in Condition 31.2.g.</p> <p>b. You must repair or replace each identified source of fugitive emissions as required in Condition 31.2.h.</p> <p>c. You must maintain records as specified in Condition 31.5.a.</p> <p>d. You must submit annual reports for collection of fugitive emissions components at a well site as required in Conditions 31.4.a and 31.4.b.</p>	In Compliance	Records Review
<p>31.4. Reporting requirements. You must submit annual reports containing the information specified in Conditions 31.4.a and 31.4.b. You must submit annual reports following the procedure specified in Condition 31.4.c. The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to 40 CFR 60.5410a. Subsequent annual reports are due no later than same date each year as the initial annual report. If you own or operate more than one affected facility, you may submit one report for multiple affected facilities provided the report contains all of the information required as specified in Conditions 31.4.a and 31.4.b. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.</p> <p>a. The general information specified in Conditions 31.4.a(i) through 31.4.a(iv) for all reports.</p> <p>(i) The company name, facility site name associated with the affected facility, US Well ID or US Well ID associated with the affected facility, if applicable, and address of the affected facility. If an address is not available for the site, include a description of the site location and provide the latitude and longitude coordinates of the site in decimal degrees to an accuracy and precision of five (5) decimals of a degree using the North American Datum of 1983.</p> <p>(ii) An identification of each affected facility being included in the annual report.</p> <p>(iii) Beginning and ending dates of the reporting period.</p> <p>(iv) A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.</p>	In Compliance	Records Review	

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31	<p>b. For the collection of fugitive emissions components at each well site within the company-defined area, the records of each monitoring survey including the information specified in Conditions 31.4.b(i) through 31.4.b(xii).</p> <p>(i) Date of the survey. (ii) Beginning and end time of the survey. (iii) Name of operator(s) performing survey. If the survey is performed by optical gas imaging, you must note the training and experience of the operator. (iv) Ambient temperature, sky conditions, and maximum wind speed at the time of the survey. (v) Monitoring instrument used. (vi) Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan. (vii) Number and type of components for which fugitive emissions were detected. (viii) Number and type of fugitive emissions components that were not repaired as required in Condition 31.2.h. (ix) Number and type of difficult-to-monitor and unsafe-to-monitor fugitive emission components monitored. (x) The date of successful repair of the fugitive emissions component. (xi) Number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair. (xii) Type of instrument used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding.</p>	In Compliance	Records Review
	<p>c. You must submit reports to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX (https://cdx.epa.gov/).) You must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (https://www3.epa.gov/ttn/chief/cedri/). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in 40 CFR 60.4. Once the form has been available in CEDRI for at least 90 calendar days, you must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in Condition 31.4, regardless of the method in which the reports are submitted.</p>	In Compliance	Records Review
	<p>31.5. Recordkeeping requirements. You must maintain the records identified as specified in 40 CFR 60.7(f) and in Condition 31.5.a. All records required by this condition must be maintained either onsite or at the nearest local field office for at least 5 years. Any records required to be maintained by this condition that are submitted electronically via the EPA's CDX may be maintained in electronic format.</p> <p>a. For each collection of fugitive emissions components at a well site, the records identified in Conditions 31.5.a(i) and 31.5.a(ii).</p> <p>(i) The fugitive emissions monitoring plan as required in Conditions 31.2.b, 31.2.c, and 31.2.d. (ii) The records of each monitoring survey as specified in Conditions 31.5.a(ii)(A) through 31.5.a(ii)(I).</p> <p>(A) Date of the survey. (B) Beginning and end time of the survey. (C) Name of operator(s) performing survey. You must note the training and experience of the operator. (D) Monitoring instrument used. (E) When optical gas imaging is used to perform the survey, one or more digital photographs or videos, captured from the optical gas imaging instrument used for conduct of monitoring, of each required monitoring survey being performed. The digital photograph must include the date the photograph was taken and the latitude and longitude of the collection of fugitive emissions components at a well site or collection of fugitive emissions components at a compressor station imbedded within or stored with the digital file. As an alternative to imbedded latitude and longitude within the digital file, the digital photograph or video may consist of an image of the monitoring survey being performed with a separately operating GPS device within the same digital picture or video, provided the latitude and longitude output of the GPS unit can be clearly read in the digital image. (F) Fugitive emissions component identification when Method 21 is used to perform the monitoring survey. (G) Ambient temperature, sky conditions, and maximum wind speed at the time of the survey.</p>	In Compliance	Records Review
	<p>(H) Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan. (I) Documentation of each fugitive emission, including the information specified in 40 CFR 60.5420a(c)(15)(ii)(I)(1) through (12). 31.6. Table 3 to NSPS Subpart OOOOa shows which parts of the General Provisions in 40 CFR 60.1 through 60.19 apply to you.</p>		
40 CFR 62 Subpart III			
32	<p>For EU ID 2, the Permittee shall comply with the following applicable requirements in 40 CFR 62 Subpart III.</p> <p>32.1. 40 CFR 62 Subpart III exempts the type of unit described in Condition 32.1.a from complying with the requirements of 40 CFR 62 Subpart III except for the requirements specified in Condition 32.1.a and in Condition 32.1.b.</p> <p>a. Units that burn greater than 30 percent municipal solid waste or refuse-derived fuel, as defined in 40 CFR part 60 Subpart Ea, Subpart Eb, Subpart AAAA, and Subpart BBBB, and that have the capacity to burn less than 35 tons (32 megagrams) per day of municipal solid waste or refuse-derived fuel, if you meet the two requirements in Conditions 32.1.a(i) and 32.1.a(ii).</p> <p>(i) Notify the EPA Administrator and Department that the unit meets these criteria. (ii) Keep records on a calendar quarter basis of the weight of municipal solid waste burned, and the weight of all other fuels and wastes burned in the unit.</p> <p>b. Owners or operators of sources that qualify for the exemption in Condition 32.1.a must submit any records required to support their claims of exemption to the EPA Administrator (or delegated enforcement authority) upon request. Any records required under Condition 32.1.a must be maintained by the source for a period of at least 5 years.</p>	In Compliance	Records Review

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No.	Summary/Description		[40 CFR 71.5(c)(9)]
40 CFR 63 Subpart A			
33	<p>NESHAPs Subpart A Requirements.</p> <p>33.1. For EU IDs 8 through 14, 23, and 23A, the Permittee shall comply with the applicable requirements of 40 CFR 63 Subpart A in accordance with the provisions for applicability of Subpart A in Table 8 to NESHAP Subpart ZZZZ.</p> <p>33.2. For EU IDs 36 and 37, the Permittee shall comply with the applicable requirements of 40 CFR 63 Subpart A in accordance with the provisions for applicability of Subpart A in Table 2 to NESHAP Subpart HH.</p> <p>33.3. For EU IDs 38 and 39, the Permittee shall comply with the applicable requirements of 40 CFR 63 Subpart A in accordance with the provisions for applicability of Subpart A in Table 3 to NESHAP Subpart CCCCC.</p>	In Compliance	Records Review
40 CFR 63 Subpart HH			
34	<p>For EU IDs 36 and 37, the Permittee shall comply with the following applicable requirements of NESHAP Subpart HH.</p> <p>34.1. The owner or operator shall maintain records of the annual facility natural gas or hydrocarbon liquid throughput each year and upon request submit such records to the EPA Administrator and Department. If the facility annual natural gas or hydrocarbon liquid throughput increases above the maximum natural gas or hydrocarbon liquid throughput calculated in 40 CFR 63.760(a)(1)(i)(A) or (a)(1)(i)(B), the maximum natural gas or hydrocarbon liquid throughput must be recalculated using the higher throughput multiplied by a factor of 1.2.</p> <p>34.2. Any source that determines it is not a major source but has actual emissions of 5 tons per year or more of a single HAP, or 12.5 tons per year or more of a combination of HAP (i.e., 50 percent of the major source thresholds), shall update its major source determination within 1 year of the prior determination or October 15, 2012, whichever is later, and each year thereafter, using gas composition data measured during the preceding 12 months.</p>	In Compliance	Records Review
	<p>34.3. Each owner or operator of an area source not located in a UA plus offset and UC boundary (as defined in 40 CFR 63.761) shall comply with Conditions 34.3.a through 34.3.c.</p> <p>a. Determine the optimum glycol circulation rate using the equation in 40 CFR 63.764(d)(2)(i).</p> <p>b. Operate the TEG dehydration unit such that the actual glycol circulation rate does not exceed the optimum glycol circulation rate determined in accordance with Condition 34.3.a. If the TEG dehydration unit is unable to meet the sales gas specification for moisture content using the glycol circulation rate determined in accordance with Condition 34.3.a, the owner or operator must calculate an alternate circulation rate using GRI-GLYCalcTM, Version 3.0 or higher. The owner or operator must document why the TEG dehydration unit must be operated using the alternate circulation rate and submit this documentation with the initial notification in accordance with 40 CFR 63.775(c)(7).</p> <p>c. Maintain a record of the determination specified in Condition 34.3.b in accordance with the requirements in 40 CFR 63.774(f) and submit the Initial Notification in accordance with the requirements in 40 CFR 63.775(c)(7). If operating conditions change and a modification to the optimum glycol circulation rate is required, the owner or operator shall prepare a new determination in accordance with 34.3.a or 34.3.b and submit the information specified under 40 CFR 63.775(c)(7)(ii) through (v).</p>	In Compliance	Records Review
	<p>34.4. The owner or operator of an area source is exempt from the requirements of Condition 34.3 if the criteria listed in Condition 34.4.a or 34.4.b are met, except that the records of the determination of these criteria must be maintained as required in Condition 34.9.</p> <p>a. The actual annual average flowrate of natural gas to the glycol dehydration unit is less than 85 thousand standard cubic meters per day, as determined by the procedures specified in Condition 34.6; or</p> <p>b. The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagram per year, as determined by the procedures specified in Condition 34.7.</p> <p>34.5. At all times the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.</p>	In Compliance	Records Review
	<p>34.6. The determination of actual flowrate of natural gas to a glycol dehydration unit shall be made using the procedures of either 40 CFR 63.772(b)(1)(i) or (b)(1)(ii).</p> <p>34.7. The determination of actual average benzene or BTEX emissions from a glycol dehydration unit shall be made using the procedures of either 40 CFR 63.772(b)(2)(i) or (b)(2)(ii). Emissions shall be determined either uncontrolled, or with federally enforceable controls in place.</p>	In Compliance	Records Review
	<p>34.8. Each owner or operator of a facility subject to NESHAP Subpart HH shall maintain records as follows:</p> <p>a. The owner or operator of an affected source subject to the provisions of NESHAP Subpart HH shall maintain files of all information (including all reports and notifications) required by NESHAP Subpart HH. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or period.</p> <p>(i) All applicable records shall be maintained in such a manner that they can be readily accessed.</p> <p>(ii) The most recent 12 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request.</p> <p>(iii) The remaining 4 years of records may be retained offsite.</p> <p>(iv) Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.</p>	In Compliance	Records Review

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34	34.9. An owner or operator of a glycol dehydration unit that meets the exemption criteria in Condition 34.4.a or 34.4.b shall maintain the records specified in Condition 34.9.a or 34.9.b, as appropriate, for that glycol dehydration unit. a. The actual annual average natural gas throughput (in terms of natural gas flowrate to the glycol dehydration unit per day) as determined in accordance with Condition 34.6, or b. The actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with Condition 34.7.	In Compliance	Records Review
40 CFR 63 Subpart ZZZZ			
35	For EU IDs 8 through 14, 23, 23A, and 43, the Permittee shall comply with the following applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions. 35.1. For EU ID 43, meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR part 60 subpart JJJJ. No further requirements apply under 40 CFR 63.	In Compliance	Records Review
	35.2. For EU IDs 8 through 14, the Permittee shall comply with the following: a. You must meet the following requirements, except during periods of startup: (i) Change oil and filter every 4,320 hours of operation or annually, whichever comes first; (ii) Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and (iii) Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	In Compliance	Record Review
	35.3. For EU IDs 23 and 23A, the Permittee shall comply with the following: a. You must meet the following requirements, except during periods of startup: (i) Change oil and filter every 1,440 hours of operation or annually, whichever comes first; (ii) Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and (iii) Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary. 35.4. For EU IDs 8 through 14, 23, and 23A, the Permittee shall comply with the following: a. During periods of startup you must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. b. You have the option to utilize an oil analysis program as described in 40 CFR 63.6625(j) in order to extend the specified oil change requirement in Conditions 35.2.a(i) and 35.3.a(i).	In Compliance	Record Review
	35.5. For EU IDs 8 through 14, 23, and 23A, the Permittee shall comply with the following: a. You must be in compliance with the emission limitations, operating limitations, and other requirements in NESHAP Subpart ZZZZ that apply to you at all times. b. At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make 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 the source.	In Compliance	Record Review
	35.6. For EU IDs 8 through 14, 23, and 23A, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.	In Compliance	Record Review
	35.7. For EU IDs 8 through 14, 23, and 23A, the Permittee shall comply with the following: a. You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Condition 35.2 according to methods specified in Condition 35.7.a(i) or 35.7.a(ii). (i) Operate and maintain the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or (ii) Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. b. You must also report each instance in which you did not meet the requirements in Table 8 to NESHAP Subpart ZZZZ that apply to you.	In Compliance	Record Review
	35.8. For EU IDs 8 through 14, 23, and 23A, the Permittee must report all deviations as defined in NESHAP Subpart ZZZZ in the semiannual monitoring report required by Condition 72.	In Compliance	Record Review
	35.9. For EU IDs 8 through 14, 23, and 23A, the Permittee shall comply with the following: a. You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan. b. Your records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). c. As specified in 40 CFR 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. d. You must keep each record 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, according to 40 CFR 63.10(b)(1).	In Compliance	Record Review

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40 CFR 63 Subpart CCCCCC			
36	For EU IDs 38 and 39, the Permittee shall comply with the following applicable requirements of NESHAP Subpart CCCCCC. 36.1. An affected source shall, upon request by the EPA Administrator or the Department, demonstrate that their monthly throughput is less than the 10,000-gallon or the 100,000-gallon threshold level, as applicable. 36.2. You must, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the EPA Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.	In Compliance	Record Review and Field Verification/Interview
	36.3. You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following: a. Minimize gasoline spills; b. Clean up spills as expeditiously as practicable; c. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use; d. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators. 36.4. You must only load gasoline into storage tanks at your facility by utilizing submerged filling and as specified in Condition 36.4.a. The distance in Condition 36.4.a shall be measured from the point in the opening of the submerged fill pipe that is the greatest distance from the bottom of the storage tank. a. Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the tank. 36.5. You must have records available within 24 hours of a request by the EPA Administrator or Department to document your gasoline throughput.	In Compliance	Records Review
	36.6. You must submit an Initial Notification that you are subject to NESHAP Subpart CCCCCC by May 9, 2008, or at the time you become subject to the control requirements in 40 CFR 63.11117. The Initial Notification must contain the information specified in 40 CFR 63.11124(a)(1)(i) through (iii). The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in 40 CFR 63.13. 36.7. You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in 40 CFR 63.13, within 60 days of the applicable compliance date specified in 40 CFR 63.11113(c). The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of NESHAP Subpart CCCCCC, and must indicate whether the facilities' monthly throughput is calculated based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of NESHAP Subpart CCCCCC at the time the Initial Notification required under Condition 36.6 is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under Condition 36.6.	In Compliance	Records Review
	36.8. Each owner or operator of an affected source under NESHAP Subpart CCCCCC shall keep records as specified in Conditions 36.8.a and 36.8.b. a. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. b. Records of actions taken during periods of malfunction to minimize emissions in accordance with Condition 36.2, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.	In Compliance	Records Review
40 CFR Part 61 Subpart A (General Provisions) & Subpart M (Asbestos)			
37	Asbestos NESHAP. The Permittee shall comply with the requirements set forth in 40 CFR 61.145, 61.150, and 61.152 of Subpart M, and the applicable sections set forth in 40 CFR 61, Subpart A and Appendix A.	In Compliance	Field Interview and/or Verification
40 CFR 68 Chemical Accident Prevention Provisions			
38	Risk Management Plan (RMP) Requirements. The Permittee shall comply with the following requirements of 40 CFR 68: 38.1 Submit a compliance schedule for meeting the requirements of 40 CFR 68 by the date provided in 40 CFR 68.10(a) and 68.96(a) and (b)(2)(i); or 38.2 As part of the Annual Compliance Certification required by Condition 73, certify compliance with all requirements of 40 CFR 68, including the registration and submission of the RMP.	In Compliance	Field Interview and/or Verification
39	Protection of Stratospheric Ozone, 40 CFR 82 40 CFR 82 Subpart F 39.1. Refrigerant Recycling and Disposal. The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 CFR 82, Subpart F.	In Compliance	Field Interview and/or Verification
	40 CFR 82 Subpart G 39.2. Significant New Alternatives Policy. The Permittee shall comply with the applicable prohibitions set out in 40 CFR 82.174.	In Compliance	Field Interview and/or Verification
	40 CFR 82 Subpart H 39.3. Halon Emissions Reduction. The Permittee shall comply with the applicable prohibitions set out in 40 CFR 82.270.	In Compliance	Field Interview and/or Verification

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General NSPS and NESHAP Requirements			
40	NESHAP Applicability Determinations. The Permittee shall determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 CFR 63) in accordance with the procedures in 40 CFR 63.1(b). 40.1. An owner or operator of a stationary source who is in the relevant source category and who determines that the source is not subject to a relevant standard or other requirement established under 40 CFR 63 must keep a record as specified in 40 CFR 63.10(b)(3).	In Compliance	Records Review
41	If an existing source becomes affected by an applicable subpart of 40 CFR 63, the Permittee shall comply with such standard by the compliance date established by the Administrator in the applicable subpart, in accordance with 40 CFR 63.6(c).	In Compliance	Records Review
42	After the effective date of any relevant standard promulgated by the Administrator under 40 CFR 63, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator and the Department of the intended construction or reconstruction. The notification must be submitted in accordance with the procedures in 40 CFR 63.9(b).	In Compliance	Records Review
43	NSPS and NESHAP Reports. The Permittee shall: 43.1. Reports: Except for previously submitted reports and federal reports and notices submitted through EPA's Central Data Exchange (CDX) and Compliance and Emissions Data Reporting Interface (CEDRI) online reporting system, attach to the operating report required by Condition 72 for the period covered by the report, a copy of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10. For reports previously submitted to ADEC or submitted through CDX/CEDRI, state in the operating report the date and a brief description of each of the reports submitted during the reporting period; and 43.2. 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.	In Compliance	Records Review
Section 5. General Conditions			
Standard Terms and Conditions			
44	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.	N/A	Advisory Condition
45	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.	N/A	Advisory Condition
46	The permit does not convey any property rights of any sort, nor any exclusive privilege.	N/A	Advisory Condition
47	Administration Fees. The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-403.	In Compliance	Records Review
48	Assessable Emissions. For each period from July 1 through the following June 30, the Permittee shall pay to the Department an annual emission fee based on the stationary source's assessable emissions, as determined by the Department under 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities 10 tons per year or greater. The quantity for which fees will be assessed is the lesser of the stationary source's 48.1. potential to emit of 3,440 tpy; or 48.2. projected annual rate of emissions, in tpy, based upon actual annual emissions for the most recent calendar year, or another 12-month period approved in writing by the Department, when demonstrated by credible evidence of actual emissions, based upon the most representative information available from one or more of the following methods: a. an enforceable test method described in 18 AAC 50.220; b. material balance calculations; c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or d. other methods and calculations approved by the Department, including appropriate vendor-provided emissions factors when sufficient documentation is provided.	In Compliance	Records Review
49	Assessable Emission Estimates. The Permittee shall comply as follows: 49.1. No later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions, as determined in Condition 48.2. Submit actual emissions estimates in accordance with the submission instructions on the Department's Standard Permit Conditions web page at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-condition-i-submission-instructions/ . 49.2. The Permittee shall include with the assessable emissions report all the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates. 49.3. If the stationary source has not commenced construction or operation on or before March 31st, the Permittee may submit to the Department's Anchorage office a waiver letter certified under 18 AAC 50.205 that states the stationary source's actual annual emissions for the previous calendar year are zero tpy and provides estimates for when construction or operation will commence. 49.4. If no estimate or waiver letter is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit in Condition 48.1.	In Compliance	Records Review
50	Good Air Pollution Control Practice. The Permittee shall do the following for EU IDs 1 and 24 through 33: 50.1. perform regular maintenance considering the manufacturer's or the operator's maintenance procedures; 50.2. keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and 50.3. keep a copy of either the manufacturer's or the operator's maintenance procedures.	In Compliance	Records Review
51	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.	In Compliance	Field Verification/Interview

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52	<p>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.</p> <p>52.1. The Permittee shall keep records of</p> <p>a. complaints received by the Permittee and complaints received by the Department and conveyed to the Permittee; and</p> <p>b. any additional precautions that are taken</p> <p>(i) to address complaints described in Condition 52.1 or to address the results of Department inspections that found potential problems; and</p> <p>(ii) to prevent future dust problems.</p> <p>52.2. The Permittee shall report according to Condition 54.</p>	In Compliance	Field Verification/Interview
53	<p>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.</p>	In Compliance	Field Verification/Interview
54	<p>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</p> <p>54.1. Monitoring. The Permittee shall monitor as follows:</p> <p>a. As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 54.</p> <p>b. The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if</p> <p>(i) after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 54; or</p> <p>(ii) the Department notifies the Permittee that it has found a violation of Condition 54.</p> <p>54.2. Recordkeeping. The Permittee shall keep records of</p> <p>a. the date, time, and nature of all emissions complaints received;</p> <p>b. the name of the person or persons that complained, if known;</p> <p>c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 54; and</p> <p>d. any corrective actions taken or planned for complaints attributable to emissions from the stationary source.</p> <p>54.3. Reporting. The Permittee shall report as follows:</p> <p>a. With each operating report under Condition 72, the Permittee shall include a brief summary report which must include the following for the period covered by the report:</p> <p>(i) the number of complaints received;</p> <p>(ii) the number of times the Permittee or the Department found corrective action necessary;</p> <p>(iii) the number of times action was taken on a complaint within 24 hours; and</p> <p>(iv) the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.</p> <p>b. The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.</p> <p>c. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 71.</p>	In Compliance	Records Review
55	<p>Technology-Based Emission Standard. If an unavoidable emergency, malfunction (as defined in 18 AAC 50.235(d)), or non-routine repair (as defined in 18 AAC 50.990(64)), causes emissions in excess of a technology-based emission standard listed in Condition 39 (refrigerants),</p> <p>55.1. take all reasonable steps to minimize levels of emissions that exceed the standard, and</p> <p>55.2. report in accordance with Condition 63; the report must include information on the steps taken to mitigate emissions and corrective measures taken or to be taken.</p>	In Compliance	Records Review
Open Burning Requirements			
56	<p>Open Burning. If open burning is conducted at this stationary source, comply with the requirements of 18 AAC 50.065.</p> <p>56.1. Keep written records to demonstrate compliance with the requirements of 18 AAC 50.065. Upon request by the Department, submit copies of the records.</p> <p>56.2. Include this condition in the annual certification required under Condition 73.</p>	In Compliance	Field Interview and/or Verification
Section 6. General Source Testing and Monitoring Requirements			
57	<p>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.</p>	In Compliance	Records Review
58	<p>Operating Conditions. Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing</p> <p>58.1. at a point or points that characterize the actual discharge into the ambient air; and</p> <p>58.2. 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.</p>	In Compliance	Records Review

Attachment A-1: Compliance Certification
Swanson River Field Operating Permit No. AQ0059TVP03, Rev. 2
Title V Renewal Application

Permit Condition		Compliance Status	Method Used to Determine Status
No.	Summary/Description		[40 CFR 71.5(c)(9)]
59	<p>Reference Test Methods. The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:</p> <p>59.1. Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 CFR 60.</p> <p>59.2. 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 CFR 61.</p> <p>59.3. 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 CFR 63.</p> <p>59.4. 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 and the form in Section 13 may be used to record data.</p> <p>59.5. 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 CFR 60, Appendix A.</p> <p>59.6. Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 CFR 51, Appendix M, Methods 201 or 201A and 202.</p> <p>59.7. Source testing for emissions of any pollutant may be determined using an alternative method approved by the Department in accordance with 40 CFR 63 Appendix A, Method 301.</p>	In Compliance	Records Review
60	<p>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).</p>	N/A	Advisory Condition
61	<p>Test Exemption. The Permittee is not required to comply with Conditions 63, 64 and 65 when the exhaust is observed for visible emissions by Method 9.</p>	N/A	Advisory Condition
62	<p>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.</p>	In Compliance	Records Review
63	<p>Test Plans. Except as provided in Condition 61, 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 57 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.</p>	In Compliance	Records Review
64	<p>Test Notification. Except as provided in Condition 61, 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.</p>	In Compliance	Records Review
65	<p>Test Reports. Except as provided in Condition 61, within 60 days after completing a source test, the Permittee shall submit one certified copy of the results in the format set out in the Source Test Report Outline, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in Condition 68. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.</p>	In Compliance	Records Review
66	<p>Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in Conditions 7 and 27.2, the three-hour average is determined using the average of three one-hour test runs.</p>	In Compliance	Records Review
Section 7. General Recordkeeping and Reporting Requirements			
Recordkeeping Requirements			
67	<p>Recordkeeping Requirements. The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:</p> <p>67.1. Copies of all reports and certifications submitted pursuant to this section of the permit; and</p> <p>67.2. Records of all monitoring required by this permit, and information about the monitoring including:</p> <p>a. the date, place, and time of sampling or measurements;</p> <p>b. the date(s) analyses were performed;</p> <p>c. the company or entity that performed the analyses;</p> <p>d. the analytical techniques or methods used;</p> <p>e. the results of such analyses; and,</p> <p>f. the operating conditions as existing at the time of sampling or measurement.</p>	In Compliance	Records Review
Reporting Requirements			
68	<p>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: <i>"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."</i> 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.</p> <p>68.1. The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if the person providing the electronic signature</p> <p>a. uses a security procedure, as defined in AS 09.80.190, that the Department has approved; and</p> <p>b. accepts or agrees to be bound by an electronic record executed or adopted with that signature.</p>	In Compliance	Records Review

Attachment A-1: Compliance Certification
Swanson River Field Operating Permit No. AQ0059TVP03, Rev. 2
Title V Renewal Application

Permit Condition		Compliance Status	Method Used to Determine Status
No.	Summary/Description		[40 CFR 71.5(c)(9)]
69	<p>Submittals. Unless otherwise directed by the Department or this permit, the Permittee shall submit to the Department one certified copy of reports, compliance certifications, and/or other submittals required by this permit. The Permittee may submit the documents electronically or by hard copy.</p> <p>69.1. Submit the certified copy of reports, compliance certifications, and/or other submittals in accordance with the submission instructions on the Department's Standard Permit Conditions web page at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-condition-xvii-submission-instructions/.</p>	In Compliance	Records Review
70	<p>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.</p>	In Compliance	Records Review
71	<p>Excess Emissions and Permit Deviation Reports. The Permittee shall report excess emissions and permit deviations as follows:</p> <p>71.1. Excess Emissions Reporting. Except as provided in Condition 54, the Permittee shall report all emissions or operations that exceed emissions standards or limits of this permit, as follows:</p> <p>a. In accordance with 18 AAC 50.240(c), as soon as possible, report</p> <p>(i) excess emissions that present a potential threat to human health or safety; and</p> <p>(ii) excess emissions that the Permittee believes to be unavoidable.</p> <p>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.</p> <p>c. If a continuous or recurring excess emissions is not corrected within 48 hours of discovery, report within 72 hours of discovery unless the Department provides written permission to report under Condition 71.1.d.</p> <p>d. Report all other excess emissions not described in Conditions 71.1.a, 71.1.b, and 71.1.c within 30 days after the end of the month during which the excess emissions occurred or as part of the next routine operating report in Condition 72 for excess emissions that occurred during the period covered by the report, whichever is sooner.</p> <p>e. If requested by the Department, the Permittee shall provide a more detailed written report to follow up on an excess emissions report.</p> <p>71.2. Permit Deviations Reporting. For permit deviations that are not "excess emissions," as defined under 18 AAC 50.990:</p> <p>a. Report according to the required deadline for failure to monitor, as specified in other applicable conditions of this permit (Condition 5.2.b).</p> <p>b. Report all other permit deviations within 30 days after the end of the month during which the deviation occurred or as part of the next routine operating report in Condition 72 for permit deviations that occurred during the period covered by the report, whichever is sooner.</p> <p>71.3. Notification Form. 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 the Division of Air Quality's Air Online Services (AOS) system webpage Permittee Portal option, http://dec.alaska.gov/applications/air/airtoolsweb, or, if the Permittee prefers, the form contained in Section 15 of this permit. The Permittee must provide all information called for by the form that is used. Submit the report in accordance with the submission instructions on the Department's Standard Permit Conditions webpage found at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-iii-and-iv-submission-instructions/.</p>	In Compliance	Records Review
72	<p>Operating Reports. During the life of this permit, the Permittee shall submit to the Department an operating report in accordance with Conditions 68 and 69 by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.</p> <p>72.1. 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.</p> <p>72.2. When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 72.1, the Permittee shall identify</p> <p>a. the date of the excess emissions or permit deviation;</p> <p>b. the equipment involved;</p> <p>c. the permit condition affected;</p> <p>d. a description of the excess emissions or permit deviation; and</p> <p>e. any corrective action or preventive measures taken and the date(s) of such actions; or</p> <p>72.3. When excess emissions or permit deviation reports have already been submitted under Condition 71 during the period covered by the operating report, the Permittee shall either</p> <p>a. include a copy of those excess emissions or permit deviation reports with the operating report; or</p> <p>b. cite the date(s) of those reports.</p> <p>72.4. The operating report must include, for the period covered by the report, a listing of emissions monitored under Conditions 3.2.e and 8.1 which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report:</p> <p>a. the date of the emissions;</p> <p>b. the equipment involved;</p> <p>c. the permit condition affected; and</p> <p>d. the monitoring result which triggered the additional monitoring.</p> <p>72.5. 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.</p>	In Compliance	Records Review

Attachment A-1: Compliance Certification
Swanson River Field Operating Permit No. AQ0059TVP03, Rev. 2
Title V Renewal Application

Permit Condition		Compliance Status	Method Used to Determine Status
No.	Summary/Description		[40 CFR 71.5(c)(9)]
73	<p>Annual Compliance Certification. Each year by March 31, the Permittee shall compile and submit to the Department an annual compliance certification report.</p> <p>73.1. Certify the compliance status of the stationary source over the preceding calendar year consistent with the monitoring required by this permit, as follows:</p> <p>a. identify each term or condition set forth in Section 3 through Section 9, that is the basis of the certification;</p> <p>b. briefly describe each method used to determine the compliance status;</p> <p>c. state whether compliance is intermittent or continuous; and</p> <p>d. identify each deviation and take it into account in the compliance certification;</p> <p>73.2. 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.</p> <p>73.3. In addition, submit a copy of the report directly to the Clean Air Act Compliance Manager, US EPA Region 10, Mail Stop: OCE-101, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101.</p>	In Compliance	Records Review
74	<p>Emission Inventory Reporting. The Permittee shall submit to the Department reports of actual emissions for the previous calendar year, by emission unit, of CO, NH₃, NO_x, PM₁₀, PM_{2.5}, SO₂, VOC, and lead (Pb) and lead compounds, as follows:</p> <p>74.1. Every-year inventory. Each year by April 30, if the stationary source's potential to emit for the previous calendar year equals or exceeds:</p> <p>a. 250 tons per year (tpy) of NH₃, PM₁₀, PM_{2.5} or VOC; or</p> <p>b. 2,500 tpy of CO, NO_x or SO₂.</p> <p>74.2. Triennial inventory. Every third year by April 30, if the stationary source's potential to emit (except actual emissions for Pb) for the previous calendar year equals or exceeds:</p> <p>a. For stationary sources located in Attainment and Unclassifiable Areas:</p> <p>(i) 0.5 tpy of actual Pb, or</p> <p>(ii) 1,000 tpy of CO; or</p> <p>(iii) 100 tpy of SO₂, NH₃, PM₁₀, PM_{2.5}, NO_x or VOC.</p> <p>b. For stationary sources located in Nonattainment Areas:</p> <p>(i) 0.5 tpy of actual Pb; or</p> <p>(ii) 1,000 tpy of CO or, when located in a CO nonattainment area, 100 tpy of CO; or</p> <p>(iii) 100 tpy of SO₂, NH₃, PM₁₀, PM_{2.5}, NO_x, or VOC; or as specified in Conditions 74.2.b(iv) through 74.2.b(viii);</p> <p>(iv) 70 tpy of SO₂, NH₃, PM_{2.5}, NO_x, or VOC in PM_{2.5} serious nonattainment; or</p> <p>(v) 70 tpy of PM₁₀ in PM₁₀ serious nonattainment areas; or</p> <p>(vi) 50 tpy of NO_x or VOC in O₃ serious nonattainment areas; or</p> <p>(vii) 25 tpy of NO_x or VOC in O₃ severe nonattainment areas; or</p> <p>(viii) 10 tpy of NO_x or VOC O₃ extreme nonattainment areas.</p>	In Compliance	Record Review and Field Verification/Interview
	<p>74.3. For reporting under Condition 74.2, the Permittee shall report the annual emissions and the required data elements under Condition 74.4 every third year for the previous calendar year as scheduled by the EPA.</p> <p>74.4. For each emissions unit and the stationary source, include in the report the required data elements contained within the form included in the Emission Inventory Instructions available at the Department's Air Online Services (AOS) system on the Point Source Emission Inventory webpage at http://dec.alaska.gov/Applications/Air/airtoolsweb/PointSourceEmissionInventory.</p> <p>74.5. Submit the report in accordance with the submission instructions on the Department's Standard Permit Conditions webpage at http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-xv-and-xvi-submission-instructions/.</p>	In Compliance	Record Review and Field Verification/Interview
Section 8. Permit Changes and Renewal			
75	<p>Permit Applications and Submittals. The Permittee shall comply with the following requirements for submitting application information to the EPA:</p> <p>75.1. 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;</p> <p>75.2. The information shall be submitted to: Part 70 Operating Permit Program, US EPA Region 10, Mail Stop: OAW-150, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101.</p> <p>75.3. 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</p> <p>75.4. The Permittee shall maintain records as necessary to demonstrate compliance with this condition.</p>	In Compliance	Records Review
76	<p>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.</p>	N/A	Advisory Condition

Attachment A-1: Compliance Certification
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Permit Condition		Compliance Status	Method Used to Determine Status
No.	Summary/Description		[40 CFR 71.5(c)(9)]
77	<p>Off Permit Changes. The Permittee may make changes that are not addressed or prohibited by this permit other than those subject to the requirements of 40 CFR Part 72 through 78 or those that are modifications under any provision of Title I of the Act to be made without a permit revision, provided that the following requirements are met:</p> <p>77.1. Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition;</p> <p>77.2. 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;</p> <p>77.3. The change shall not qualify for the shield under 40 CFR 71.6(f);</p> <p>77.4. 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.</p>	In Compliance	Records Review and Field Verification/Interview
78	<p>Operational Flexibility. CAA Section 502(b)(10) changes may be made within the permitted stationary source without 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): Provided, that the Permittee provides EPA and the Department with written notification no less than seven days in advance of the proposed change.</p> <p>78.1. For each such change, the written notification required by Condition 78 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.</p> <p>78.2. The permit shield described in 40 CFR 71.6(f) shall not apply to any change made pursuant to Condition 78.</p>	In Compliance	Records Review and Field Verification/Interview
79	<p>Permit Renewal. To renew this permit, the Permittee shall submit to the Department an application under 18 AAC 50.326 no sooner than January 8, 2024 and no later than January 8, 2025. The renewal application shall be complete before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the stationary source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 CFR 71.7(b) and 71.5(a)(1)(iii).</p>	In Compliance	Records Review
Section 9. Compliance Requirements			
General Compliance Requirements			
80	Compliance with permit terms and conditions is considered to be compliance with those requirements that are 80.1. included and specifically identified in the permit; or 80.2. determined in writing in the permit to be inapplicable.	N/A	Advisory Condition
81	The Permittee must comply with each permit term and condition.	N/A	Advisory Condition
	81.1. For applicable requirements with which the stationary source is in compliance, the Permittee shall continue to comply with such requirements. 81.2. 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 46.14.281; or c. denial of an operating permit renewal application.	N/A	Advisory Condition
82	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.	N/A	Advisory Condition
83	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 83.1. enter upon the premises where a source subject to the permit is located or where records required by the permit are kept; 83.2. have access to and copy any records required by the permit; 83.3. inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and 83.4. sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.	In Compliance	Field Verification/Interview
84	For applicable requirements that will become effective during the permit term, the Permittee shall meet such requirements on a timely basis.	N/A	Advisory Condition

**Attachment A-2: Additional Application Requirements for Sources
within the Regional Haze Special Protection Area**

Per 18 AAC 50.265, an application for a construction permit, new permit, permit renewal, or permit modification must include the following information.

18 AAC 50.265(4)(A)

Per 18 AAC 50.265(4)(A), the anticipated equipment major maintenance schedules are currently unavailable.

18 AAC 50.265(4)(B)

Per 18 AAC 50.265(4)(B), the projected equipment life of each significant emissions unit located at the stationary source is currently unavailable.

18 AAC 50.265(4)(C)

The existing stationary source was included in the baseline analysis the Alaska Department of Environmental Conservation (ADEC) prepared for developing 18 AAC 50.265. According to the State Air Quality Control Plan Volume II, Section III.K.13.F, the Regional Haze Rule requires the ADEC to submit a plan to make reasonable progress towards natural visibility conditions at Class I areas. To achieve this goal, the ADEC is required to develop a long-term strategy that must “include emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress” and “identify all anthropogenic sources of visibility impairment considered by the state in developing its long-term strategy”. In developing these goals, the ADEC selected sources and considered four factors to evaluate the potential control measures for the selected sources: 1) cost of compliance; 2) time necessary for compliance; 3) energy and non-air quality environmental impacts; and 4) remaining useful life. To select sources for evaluation, the ADEC used a two-step approach. The initial step (step one) involved an area of influence (AOI) and weighted emissions potential (WEP) analysis. The final step (step two) involved a Q/d analysis (quantity of actual emissions in tons per year divided by distance in kilometers). Swanson River Field was not selected for evaluation. Because all emissions associated with the proposed project would be included in the baseline analysis, no further analysis was conducted.

18 AAC 50.265(4)(D)

Per 18 AAC 50,265(4)(D), no mitigation measures have been identified as necessary to minimize any potential adverse impacts on the reasonable further progress goals for Class I areas, as identified in the State Air Quality Control Plan, adopted by reference in 18 AAC 50.030.



Section B

Emission Units

Form B:	Emission Unit Listing for This Application
Form B1:	Emission Unit Detail Form – External Combustion Equipment
Form B2:	Emission Unit Detail Form – Internal Combustion Equipment
Form B3:	Emission Unit Detail Form – Incinerators
Form B5:	Emission Unit Detail Form – Miscellaneous Emission Units

FORM B
Emission Unit Listing For This Application

Permit Number: AQ0059TVP03, Rev. 2

EMISSION UNIT LISTING: New, Modified, Previously Unpermitted, Replaced, Deleted					
Emission Unit ID Number	Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date	Notes
Emission Units To Be ADDED By This Application (New, Previously Unpermitted, or Replacement)					
44	Emergency Generator Engine	Generac RG036 Engine	36 kW-e	2023	Unit added, see the July 2023 OPCN.
45	Emergency Generator Engine	Briggs & Stratton PP20 Engine	20 kW-e	2023	Unit added, see the October 2023 OPCN.
Emission Units To Be MODIFIED By This Application					
2	Refuse Incinerator	Incinomite J83 DS	Waste - 150 lb/hr Fuel Gas - 0.8 MMBtu/hr	Pre-1975	Add the waste and fuel gas rating.
24/25	Main Flare (900#)/ Flare (150#)	Main Flare (900#) / Flare (150#)	16.041 MMBtu/hr	Pre-1975	Combine EU IDs 24 and 25. These flares are two lines that connect to the same physical flare.
42a	Boiler	Superior Boiler	2.7 MMBtu/hr	Unknown	Change from significant to insignificant based on PTE. Correct the description to a Superior Boiler.
43	Emergency Generator	Cummins C20N6 Engine	40 hp	2019	Update the rating to use engine hp instead of generator kW-electric.
46	Sand Pit Burner	Heater	5 MMBtu/hr	Unknown	Change from insignificant to significant based on PTE and add an ID number.
Emission Units To Be DELETED By This Application					
23	Emergency Generator	Waukesha #2	200 kW	Pre-6/12/06	Unit has been decommissioned.
23A	Emergency Generator	Waukesha #3	250 kW	Pre-6/12/06	Unit has been decommissioned.
26	Smokeless Flare (45#)	Smokeless Flare (45#)	0.083 MMscf/hr	Unknown	Unit has been decommissioned.

FORM B
Emission Unit Listing For This Application

SIGNIFICANT EMISSION UNIT LISTING: Title V permitted emission units that have not been modified				
Emission Unit ID Number	Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date
1	Plant Boiler F-201	Cleaver Brooks CB760-150	6.275 MMBtu/hr	Pre-1975
8	Compressor Drive K-11	Clark TLA-10	3,777 hp	1965
9	Compressor Drive K-12	Clark TLA-10	3,777 hp	1965
10	Compressor Drive K-13	Clark TLA-10	3,777 hp	1965
11	Compressor Drive K-14	Clark TLA-10	3,777 hp	1965
12	Compressor Drive K-15	Clark TLA-10	3,777 hp	1967
13	Compressor Drive K-17	Clark TLAD-10	4,000 hp	1974
14	Compressor Drive K-18	Clark TLAD-10	4,000 hp	1974
27	Flare 1-27	Flare	0.345 MMscf/hr	Unknown
28	Flare 1-33	Flare	0.605 MMscf/hr	Unknown
29	Flare 1-4	Flare	3.744 MMscf/hr	Unknown
30	Flare 1-9	Flare	3.903 MMscf/hr	Unknown
31	Flare 2-15	Flare	0.126 MMscf/hr	Unknown
32	Flare 3-4	Flare	2.305 MMscf/hr	Unknown
33	Flare 3-9	Flare	2.085 MMscf/hr	Unknown
36	TEG Regenerator Vent	CIGGS1 Dehydration Unit	105 MMscfd	Pre-1997
37	TEG Regenerator Vent	CIGGS2 Dehydration Unit	105 MMscfd	Pre-1997
38	Gasoline Dispensing Facility	Located at the Shop	N/A	Pre-11/9/06
39	Gasoline Dispensing Facility	Located at the Pipe and Supply Yard	N/A	Pre-11/9/06
40	Generator	Generac Guardian RV	19 kW	Const. 6/21/07
41	Generator	Generac Guardian RV	19 kW	Const. 6/21/07
<i>Generic Drill Rig (Section 12)</i>				
N/A	Drilling Engine	Caterpillar D-398 (NRE)	800 kW	TBD
N/A	Drilling Engine	Caterpillar D-398 (NRE)	800 kW	TBD
N/A	Drilling Engine	Caterpillar D-398 (NRE)	800 kW	TBD
N/A	Drilling Engine	Caterpillar D-398 (NRE)	800 kW	TBD
N/A	Drilling Engine	Caterpillar 3306 (NRE)	120 kW	TBD
N/A	Drilling Boiler	Drilling Boiler	6.69 MMBtu/hr	TBD
N/A	Drilling Boiler	Drilling Boiler	6.69 MMBtu/hr	TBD
N/A	Drilling Heater	Drilling Heater	4.2 MMBtu/hr	TBD
N/A	Test Flare	Flare	300 MMscf/yr	TBD

FORM B
Emission Unit Listing For This Application

INSIGNIFICANT EMISSION UNIT LISTING: Insignificant Title V permitted emission units that have not been modified				
Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date	Basis for Insignificant Status
Boiler (EU ID 42a)	Superior Boiler	2.7 MMBtu/hr	Unknown	18 AAC 50.326(e) – potentials < rates - NSPS Dc – < 10 MMBtu/hr - NESHAP JJJJJ – gas-fired
Microturbine (x2)	Capstone Microturbine	65 kW, each	Unknown	18 AAC 50.326(e) – potentials < rates - NSPS GG, KKKK – < 10 MMBtu/hr
Oil Heater	Heater Model S061359	4 MMBtu/hr	Unknown	18 AAC 50.326(e) – potentials < rates - NSPS Dc – < 10 MMBtu/hr - NESHAP JJJJJ – gas-fired
Space Heater	National US Radiator Boiler	0.3 MMBtu/hr	Unknown	
Water Heater	Day & Night 100JSB-7	0.22 MMBtu/hr	Unknown	
Space Heater (x2)	Modine	0.01 MMBtu/hr, each	Unknown	
Space Heater	Modine	0.081 MMBtu/hr	Unknown	
Space Heater	Modine	0.231 MMBtu/hr	Unknown	
Space Heater (x4)	Modine	0.075 MMBtu/hr, each	Unknown	
Space Heater (x2)	Modine	0.16 MMBtu/hr, each	Unknown	
Space Heater	Modine	0.328 MMBtu/hr	Unknown	
Space Heater (x2)	Modine	0.2 MMBtu/hr, each	Unknown	
Space Heater (x2)	Reznor	0.4 MMBtu/hr, each	Unknown	
Space Heater	Reznor	0.312 MMBtu/hr	Unknown	
Space Heater	Janitrol UCS 175-55	0.2 MMBtu/hr	Unknown	
Space Heater	Modine	0.3 MMBtu/hr	Unknown	
Reboiler (x2)	Glycol Reboiler	0.5 MMBtu/hr, each	Unknown	
Heater	Struther Wells Therminol	1.5 MMBtu/hr	Unknown	
Space Heater	Ready R-100	0.1 MMBtu/hr	Unknown	18 AAC 50.326(e) – potentials < rates - NSPS Dc – < 10 MMBtu/hr - NESHAP JJJJJ – not a boiler
Portable Heater	ICE OHV350-II	0.3 MMBtu/hr	Unknown	
Pressure Washer	Pressure Washer with Heater	0.4 MMBtu/hr	Unknown	
Portable Heater (x3)	Portable Indirect Heater	0.5 MMBtu/hr, each	Unknown	18 AAC 50.326(e) – potentials < rates - NSPS Dc – < 10 MMBtu/hr - NESHAP JJJJJ – gas-fired
Oil Heater	TS2-15 Oil Heater	4 MMBtu/hr	Unknown	
Oil Heater	TS1-27 Oil Heater	4 MMBtu/hr	Unknown	
Oil Heaters (x2)	TS1-33 Oil Heaters, <4 MMBtu/hr each	8 MMBtu/hr, total	Unknown	
Oil Heater	TS1-4 Oil Heater	4 MMBtu/hr	Unknown	
Oil Heater	TS1-9 Oil Heater	4 MMBtu/hr	Unknown	
Oil Heater	TS3-4 Oil Heater	4 MMBtu/hr	Unknown	
Oil Heater	TS3-9 Oil Heater	4 MMBtu/hr	Unknown	
Line Heaters (x61)	Line Heaters, <3 MMBtu/hr each	61.9 MMBtu/hr, total	Unknown	
Line Heater	Bridge ANSI Choke Heater	1 MMBtu/hr	Unknown	

FORM B
Emission Unit Listing For This Application

INSIGNIFICANT EMISSION UNIT LISTING: Insignificant Title V permitted emission units that have not been modified				
Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date	Basis for Insignificant Status
Crude Oil Tank	Tank 22	327,138 gal	Post-7/23/84	18 AAC 50.326(f)(89) – oil water separator - NSPS K, Ka – construction post 7/23/1984 - NSPS Kb, Kc – process tank
Produced Water Tank	TS 2-15 Produced Water Tank	16,800 gal	Unknown	18 AAC 50.326(e) – potentials < rates - NSPS K, Ka – < 40,000 gallons - NSPS Kb – < 19,800 gallons - NSPS Kc – constructed before 10/4/2023
Produced Water Tank	TS 1-27 Produced Water Tank	16,800 gal	Unknown	
Produced Water Tank	TS 1-4 Produced Water Tank	357 gal	Unknown	
Jet A/Diesel Tanks (x3)	Jet A/Diesel Tanks	6,000 gal, each	Unknown	
Jet A/Diesel Tank	Jet A/Diesel Tank	6,044 gal	Unknown	
Jet A/Diesel Tanks (x2)	Jet A/Diesel Tanks	2,000 gal, each	Unknown	
Diesel Fuel Tank	Diesel Fuel Tank	2,169 gal	Unknown	
Kerosene (Jet A) Tank	Kerosene (Jet A) Tank	500 gal	Unknown	
Gasoline Tank	Gasoline Tank	2,169 gal	Unknown	
Gasoline Tank	Gasoline Tank	2,000 gal	Unknown	
Gasoline Tank	Gasoline Tank	90 gal	Unknown	
Gasoline Tank	Gasoline Tank	75 gal	Unknown	
Primary Xylene Storage Tank	Primary Xylene Storage Tank	10,000 gal	Unknown	
Process Flare	Propane Process Flare	0.0363 MMBtu/day	Unknown	

FORM B1

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

Permit Number: AQ0059TVP03, Rev. 2

1.	Emission Unit ID Number // Operating Scenario	1 // Base Scenario
2.	Date installation/construction commenced	Pre-1975
3.	Date installed	Pre-1975
4.	Emission Unit serial number	Unknown (S-B-8820)
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Cleaver Brooks
7.	Description of emission unit, including type of boiler/heater and firing method: Cleaver Brooks CB760-150 Fuel Gas-Fired Boiler	
8.	Rated design capacity (heat input, MMBtu/hr)	6.275 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	N/A
10.	Maximum steam pressure (psi)	N/A
11.	Maximum steam temperature (°F)	N/A

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

Fuel	Maximum hourly firing rate (specify units)
Fuel Gas	Approximately 6.2 Mscf/hr

13.	Is waste heat utilized for any purpose? If yes, describe: N/A
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FORM B1

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

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standard	Do not cause or allow visible emissions, excluding condensed water vapor, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes.	Monitor, record, and report in accordance with Condition 1.2.
AQ0059TVP03, Rev. 2 – Condition 7	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standard	Do not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 7.2.
AQ0059TVP03, Rev. 2 – Condition 11	18 AAC 50.055(c)	Sulfur Compound Emissions Standard	Do not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14 through 16.
AQ0059TVP03, Rev. 2 – Condition 50	18 AAC 50.346(b)(5)	Good Air Pollution Control Practices	Perform regular maintenance considering the manufacturers or the operator's maintenance procedures; keep records of any maintenance that would have a significant effect on emissions; and keep a copy of either the manufacturer's or the operator's maintenance procedures.	Yes.	Annual Compliance Audit.

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

FORM B1

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

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

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subpart D	EU ID 1 has a heat input less than 250 MMBtu/hr.
40 CFR 60 Subpart Da	EU ID 1 commenced construction prior to September 18, 1978 and has not been modified or reconstructed thereafter.
40 CFR 60 Subpart Db	EU ID 1 commenced construction prior to June 19, 1984 and has not been modified or reconstructed thereafter..
40 CFR 60 Subpart Dc	EU ID 1 has a heat input less than 10 MMBtu/hr.
40 CFR 63 Subpart JJJJJ	EU ID 1 fires only fuel gas.

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

FORM B3
Emission Unit Detail Form - Incinerators

Permit Number: AQ0059TVP03, Rev. 2

1.	Emission Unit ID Number // Operating Scenario	2 // Base Scenario
2.	Date installation/construction commenced ¹	Pre-1975
3.	Date installed	Pre-1975
4.	Emission Unit serial number	Unknown (S-INCINERATOR)
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Incinomite
7.	Waste classification	Solid
8.	Type of incinerator	Single Combustion Chamber
9.	Charge information:	
	batch or continuous	Batch
	charge method	Manual
	charge measurement method	Weighed
10.	Primary combustion chamber information:	
	temperature (°F)	1,000-1,300
	rated heat input (MMBtu/hr)	0.8
	type/grade fuel(s)	Fuel Gas
11.	Secondary combustion chamber information:	
	temperature (°F)	N/A
	gas residency time [attach calculations]	
	rated heat input (MMBtu/hr)	
	type/grade fuel(s)	
12.	Automatically controlled auxiliary burners?	Unknown
13.	Interlock system to control charging?	Unknown
14.	Air lock system?	Unknown
15.	Waste heat boiler?	No
16.	Maximum flue gas outlet temperature (°F)	Unknown
17.	Rated capacity (tons material /day)	1.8
18.	Emergency bypass stack?	No
19.	Incinerator design efficiency (%) [attach calculations]	Unknown

¹ See page 2 of the Form B instructions regarding installation/construction date and consult regulations under 40 C.F.R. 60 (NSPS) and 40 C.F.R. 63 (NESHAP) for applicability dates.

FORM B3
Emission Unit Detail Form - Incinerators

20. Incinerated materials:

Material	Origin of material	Weight percentage (%)	Heating value (Btu/lb)
Fuel Gas	Field	TBD	1,005 Btu/scf
MSW	Onsite	TBD	9.95 MMBtu/ton

21. Attach diagram. N/A

22. Attach energy balance equations for the materials incinerated. N/A

FORM B3
Emission Unit Detail Form - Incinerators

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 2	18 AAC 50.050(a)	Incinerator Visible Emissions Standard	Do not cause or allow visible emissions, excluding condensed water vapor, to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes.	Monitor, record, and report in accordance with Conditions 2.1 through 2.3.
AQ0059TVP03, Rev. 2 – Condition 21	Operating Permit 059TVP01, Rev. 1, Condition 9	Throughput Limit	Limit the mass of waste loaded into EU ID 2 to 300,000 pounds in any consecutive 12-month period.	Yes.	Monitor, record, and report in accordance with Condition 21.1 through 21.3.
AQ0059TVP03, Rev. 2 – Condition 32	40 CFR 62.14525(c)(2) <i>Regulation change - 40 CFR 62.14530a(l)</i>	40 CFR 62, Subpart III Exemption <i>Regulation change - 40 CFR 62, Subpart IIIa Exemption</i>	EU ID 2 is exempt from 40 CFR 62, Subpart III if the requirements of this condition are met. <i>Regulation change – Incineration units located in the state of Alaska are not subject to this subpart.</i>	Yes.	Monitor, record, and report in accordance with Condition 32.1. <i>Regulation change – please capture the requirements under the newly promulgated Subpart IIIa.</i>

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

FORM B3
Emission Unit Detail Form - Incinerators

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

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subpart E	EU ID 2 does not have the capacity to burn more than 50 tons per day.
40 CFR 60 Subpart Ec	EU ID 2 is not designated as a hospital/medical/infectious waste unit.
40 CFR 60 Subpart AAAA	EU ID 2 is not designated as a small municipal waste combustion unit
40 CFR 60 Subpart CCCC	EU ID 2 commenced construction prior to November 30, 1999 and has not been reconstructed or modified thereafter.
40 CFR 60 Subpart EEEE	EU ID 2 commenced construction prior to December 9, 2004 and has not been reconstructed or modified thereafter.
18 AAC 50.050(b)	EU ID 2 has a capacity of less than 1,000 pounds per hour. There are no other incinerators within the stationary source.

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

FORM B2

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

Permit Number: AQ0059TVP03, Rev. 2

1.	Emission Unit ID Number // Operating Scenario	8, 9, 10, & 11 // Base Scenario
2.	Date installation/construction commenced ¹	1965
3.	Date installed	1965
4.	Emission Unit serial number	EU ID 8 – Unknown (S-RCP-DC0K11) EU ID 9 – Unknown (S-RCP-DC0K12) EU ID 10 – Unknown (S-RCP-DC0K13) EU ID 11 – Unknown (S-RCP-DC0K14)
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Clark TLA-10
7.	Type of combustion device	Fuel Gas-Fired Compressor Engines
8.	Rated design capacity (horsepower rating for engines)	3,777 hp, each
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

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

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

Fuel	Maximum hourly firing rate (specify units)
Fuel Gas	Approximately 30.1 Mscf/hr, each

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A
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FORM B2

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

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standard	Do not cause or allow visible emissions, excluding condensed water vapor, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes.	Monitor, record, and report in accordance with Condition 1.2.
AQ0059TVP03, Rev. 2 – Condition 7	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standard	Do not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 7.2.
AQ0059TVP03, Rev. 2 – Condition 11	18 AAC 50.055(c)	Sulfur Compound Emissions Standard	Do not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14 through 16.
AQ0059TVP03, Rev. 2 – Condition 33.1	40 CFR 63.6665 & Table 8, Subpart ZZZZ	NESHAP Subpart A General Requirements	Comply with the applicable requirements of Subpart A in accordance with the provisions for applicability in Subpart ZZZZ, Table 8.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Conditions 35.2 & 35.4b	40 CFR 63.6603(b) & Table 2d, Item 1, Subpart ZZZZ	NESHAP Subpart ZZZZ Work and Management Practices Standards	Change oil and filter every 4,320 hours of operation or annually, whichever comes first; inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary. Sources have the option to utilize an oil analysis program to extend the oil change requirement.	Yes.	Record, and report in accordance with Conditions 35.8 and 35.9. <i>Regulation change – please capture the new requirement for oil changes to be within 1 year + 30 days instead of annually.</i>

FORM B2

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 35.4a	40 CFR 63.6625(h) & Table 2d, Subpart ZZZZ	NESHAP Subpart ZZZZ Operation Requirements	Minimize the engine's time spent at idle during startup and the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 35.5	40 CFR 63.6605(b), Subpart ZZZZ	NESHAP Subpart ZZZZ Good Air Pollution Control Practices	At all times operate and maintain the unit in a manner consistent with safety and good air pollution control practices for minimizing emissions.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Conditions 35.6 & 35.7	40 CFR 63.6625(e)(4), 63.6640(a) & Table 6 Item 9, Subpart ZZZZ	NESHAP Subpart ZZZZ Operation and Maintenance Requirements	Operate and maintain the stationary RICE and after-treatment control device according to either the manufacturer's emission-related written instructions or a maintenance plan.	Yes.	Record, and report in accordance with Conditions 35.8 and 35.9.

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

FORM B2

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

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

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subpart JJJJ	EU IDs 8 through 11 commenced construction prior to June 12, 2006 and have not been modified or reconstructed thereafter.
40 CFR 63 Subpart ZZZZ, 63.6600, 63.6601, 63.6602, 63.6610, & 63.6611	Swanson River Field is not a major source of HAPs.
40 CFR 63 Subpart ZZZZ, 63.6603(b)-(e), 63.6604, 63.6612, 63.6615, 63.6620, 63.6625(a)-(d), (f), (i), 63.6630(c), (d), (e), 63.6635, 63.6640(c), (d), (f), 63.6645, 63.6650(a)-(e), (g)-(i), & 63.6655(a)-(d), (f)	EU IDs 8 through 11 are not subject to any numerical emission limits, are 2SLB engines, are greater than 500 horsepower, and are non-emergency engines.

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

FORM B2

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

Permit Number: AQ0059TVP03, Rev. 2

1.	Emission Unit ID Number // Operating Scenario	12 // Base Scenario
2.	Date installation/construction commenced ¹	1967
3.	Date installed	1967
4.	Emission Unit serial number	Unknown (S-RCP-DC0K15)
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Clark TLA-10
7.	Type of combustion device	Fuel Gas-Fired Compressor Engine
8.	Rated design capacity (horsepower rating for engines)	3,777 hp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

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

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

Fuel	Maximum hourly firing rate (specify units)
Fuel Gas	Approximately 30.1 Mscf/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A
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FORM B2

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

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standard	Do not cause or allow visible emissions, excluding condensed water vapor, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes.	Monitor, record, and report in accordance with Condition 1.2.
AQ0059TVP03, Rev. 2 – Condition 7	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standard	Do not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 7.2.
AQ0059TVP03, Rev. 2 – Condition 11	18 AAC 50.055(c)	Sulfur Compound Emissions Standard	Do not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14 through 16.
AQ0059TVP03, Rev. 2 – Condition 20	Operating Permit 059TVP01, Rev. 1 Condition 8	Limits on Hours of Operation for EU IDs 12-14	Limit the cumulative hours of operation of EU IDs 12, 13, and 14 to 17,520 hours in any consecutive 12-month period.	Yes.	Report in accordance with Condition 20.1 through 20.3.
AQ0059TVP03, Rev. 2 – Condition 33.1	40 CFR 63.6665 & Table 8, Subpart ZZZZ	NESHAP Subpart A General Requirements	Comply with the applicable requirements of Subpart A in accordance with the provisions for applicability in Subpart ZZZZ, Table 8.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Conditions 35.2 & 35.4b	40 CFR 63.6603(b) & Table 2d, Item 1, Subpart ZZZZ	NESHAP Subpart ZZZZ Work and Management Practices Standards	Change oil and filter every 4,320 hours of operation or annually, whichever comes first; inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary. Sources have the option to utilize an oil analysis program to extend the oil change requirement.	Yes.	Record, and report in accordance with Conditions 35.8 and 35.9. <i>Regulation change – please capture the new requirement for oil changes to be within 1 year + 30 days instead of annually.</i>

FORM B2

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 35.4a	40 CFR 63.6625(h) & Table 2d, Subpart ZZZZ	NESHAP Subpart ZZZZ Operation Requirements	Minimize the engine's time spent at idle during startup and the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 35.5	40 CFR 63.6605(b), Subpart ZZZZ	NESHAP Subpart ZZZZ Good Air Pollution Control Practices	At all times operate and maintain the unit in a manner consistent with safety and good air pollution control practices for minimizing emissions.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Conditions 35.6 & 35.7	40 CFR 63.6625(e)(4), 63.6640(a) & Table 6 Item 9, Subpart ZZZZ	NESHAP Subpart ZZZZ Operation and Maintenance Requirements	Operate and maintain the stationary RICE and after-treatment control device according to either the manufacturer's emission-related written instructions or a maintenance plan.	Yes.	Record, and report in accordance with Conditions 35.8 and 35.9.

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

FORM B2

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

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

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subpart JJJJ	EU ID 12 commenced construction prior to June 12, 2006 and has not been modified or reconstructed thereafter.
40 CFR 63 Subpart ZZZZ, 63.6600, 63.6601, 63.6602, 63.6610, & 63.6611	Swanson River Field is not a major source of HAPs.
40 CFR 63 Subpart ZZZZ, 63.6603(b)-(e), 63.6604, 63.6612, 63.6615, 63.6620, 63.6625(a)-(d), (f), (i), 63.6630(c), (d), (e), 63.6635, 63.6640(c), (d), (f), 63.6645, 63.6650(a)-(e), (g)-(i), & 63.6655(a)-(d), (f)	EU ID 12 is not subject to any numerical emission limits, is a 2SLB engine, is greater than 500 horsepower, and is a non-emergency engine.

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

FORM B2

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

Permit Number: AQ0059TVP03, Rev. 2

1.	Emission Unit ID Number // Operating Scenario	13 & 14 // Base Scenario
2.	Date installation/construction commenced ¹	1974
3.	Date installed	1974
4.	Emission Unit serial number	EU ID 13 – Unknown (S-RCP-DC0K17) EU ID 14 – Unknown (S-RCP-DC0K18)
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Clark TLAD-10
7.	Type of combustion device	Fuel Gas-Fired Compressor Engines
8.	Rated design capacity (horsepower rating for engines)	4,000 hp, each
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

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

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

Fuel	Maximum hourly firing rate (specify units)
Fuel Gas	Approximately 31.8 Mscf/hr, each

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A
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FORM B2

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

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standard	Do not cause or allow visible emissions, excluding condensed water vapor, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes.	Monitor, record, and report in accordance with Condition 1.2.
AQ0059TVP03, Rev. 2 – Condition 7	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standard	Do not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 7.2.
AQ0059TVP03, Rev. 2 – Condition 11	18 AAC 50.055(c)	Sulfur Compound Emissions Standard	Do not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14 through 16.
AQ0059TVP03, Rev. 2 – Condition 20	Operating Permit 059TVP01, Rev. 1 Condition 8	Limits on Hours of Operation for EU IDs 12-14	Limit the cumulative hours of operation of EU IDs 12, 13, and 14 to 17,520 hours in any consecutive 12-month period.	Yes.	Report in accordance with Condition 20.1 through 20.3.
AQ0059TVP03, Rev. 2 – Condition 33.1	40 CFR 63.6665 & Table 8, Subpart ZZZZ	NESHAP Subpart A General Requirements	Comply with the applicable requirements of Subpart A in accordance with the provisions for applicability in Subpart ZZZZ, Table 8.	Yes.	Annual Compliance Audit.

FORM B2

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Conditions 35.2 & 35.4b	40 CFR 63.6603(b) & Table 2d, Item 1, Subpart ZZZZ	NESHAP Subpart ZZZZ Work and Management Practices Standards	Change oil and filter every 4,320 hours of operation or annually, whichever comes first; inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary. Sources have the option to utilize an oil analysis program to extend the oil change requirement.	Yes.	Record, and report in accordance with Conditions 35.8 and 35.9. <i>Regulation change – please capture the new requirement for oil changes to be within 1 year + 30 days instead of annually.</i>
AQ0059TVP03, Rev. 2 – Condition 35.4a	40 CFR 63.6625(h) & Table 2d, Subpart ZZZZ	NESHAP Subpart ZZZZ Operation Requirements	Minimize the engine's time spent at idle during startup and the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 35.5	40 CFR 63.6605(b), Subpart ZZZZ	NESHAP Subpart ZZZZ Good Air Pollution Control Practices	At all times operate and maintain the unit in a manner consistent with safety and good air pollution control practices for minimizing emissions.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Conditions 35.6 & 35.7	40 CFR 63.6625(e)(4), 63.6640(a) & Table 6 Item 9, Subpart ZZZZ	NESHAP Subpart ZZZZ Operation and Maintenance Requirements	Operate and maintain the stationary RICE and after-treatment control device according to either the manufacturer's emission-related written instructions or a maintenance plan.	Yes.	Record, and report in accordance with Conditions 35.8 and 35.9.

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

FORM B2

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

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

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subpart JJJJ	EU IDs 13 and 14 commenced construction prior to June 12, 2006 and have not been modified or reconstructed thereafter.
40 CFR 63 Subpart ZZZZ, 63.6600, 63.6601, 63.6602, 63.6610, & 63.6611	Swanson River Field is not a major source of HAPs.
40 CFR 63 Subpart ZZZZ, 63.6603(b)-(e), 63.6604, 63.6612, 63.6615, 63.6620, 63.6625(a)-(d), (f), (i), 63.6630(c), (d), (e), 63.6635, 63.6640(c), (d), (f), 63.6645, 63.6650(a)-(e), (g)-(i), & 63.6655(a)-(d), (f)	EU IDs 13 and 14 are not subject to any numerical emission limits, are 2SLB engines, are greater than 500 horsepower, and are non-emergency engines.

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

FORM B5
Emission Unit Detail Form - Miscellaneous Emission Units

Permit Number: AQ0059TVP03, Rev. 2

1.	Emission Unit ID Number // Operating Scenario	24 & 25 // Base Scenario
2.	Date installation/construction commenced	Unknown
3.	Date installed	Unknown
4.	Emission Unit serial number	Unknown (S-SP-150# & S-SP-MAIN)
5.	Special control requirements? [if yes, describe]	No
6.	Description of process: 16.041 MMBtu/hr Flare – two lines that connect to the same physical flare	
7.	Continuous or batch process? [if batch, maximum batches per hour]	Continuous

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

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

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

Product	Maximum design capacity (lbs/batch or lbs/hr)
Produced Gas	16.0 Mscf/hr, total

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

FORM B5

Emission Unit Detail Form - Miscellaneous Emission Units

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standard	Do not cause or allow visible emissions, excluding condensed water vapor, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes.	Monitor, record, and report in accordance with Condition 1.3.
AQ0059TVP03, Rev. 2 – Condition 7	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standard	Do not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 7.3.
AQ0059TVP03, Rev. 2 – Condition 11	18 AAC 50.055(c)	Sulfur Compound Emissions Standard	Do not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14 through 16.
AQ0059TVP03, Rev. 2 – Condition 50	18 AAC 50.346(b)(5)	Good Air Pollution Control Practices	Perform regular maintenance considering the manufacturers or the operator's maintenance procedures; keep records of any maintenance that would have a significant effect on emissions; and keep a copy of either the manufacturer's or the operator's maintenance procedures.	Yes.	Annual Compliance Audit.

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

FORM B5

Emission Unit Detail Form - Miscellaneous Emission Units

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

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

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

FORM B5
Emission Unit Detail Form - Miscellaneous Emission Units

Permit Number: AQ0059TVP03, Rev. 2

1.	Emission Unit ID Number // Operating Scenario	27, 28, 29, 30, 31, 32, & 33 // Base Scenario
2.	Date installation/construction commenced	Unknown
3.	Date installed	Unknown
4.	Emission Unit serial number	EU ID 27 - Unknown (S-SP 1-27) EU ID 28 - Unknown (S-SP 1-33) EU ID 29 - Unknown (S-SP 1-4) EU ID 30 - Unknown (S-SP 1-9) EU ID 31 - Unknown (S-SP 2-15) EU ID 32 - Unknown (S-SP 3-4) EU ID 33 - Unknown (S-SP 3-9)
5.	Special control requirements? [if yes, describe]	No
6.	Description of process: EU ID 27 - 0.345 MMscf/hr, Flare 1-27 EU ID 28 - 0.605 MMscf/hr, Flare 1-33 EU ID 29 - 3.744 MMscf/hr, Flare 1-4 EU ID 30 - 3.903 MMscf/hr, Flare 1-9 EU ID 31 - 0.126 MMscf/hr, Flare 2-15 EU ID 32 - 2.305 MMscf/hr, Flare 3-4 EU ID 33 - 2.085 MMscf/hr, Flare 3-9	
7.	Continuous or batch process? [if batch, maximum batches per hour]	Continuous

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

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

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

Product	Maximum design capacity (lbs/batch or lbs/hr)
Produced Gas	EU ID 27 - 345 Mscf/hr EU ID 28 - 605 Mscf/hr EU ID 29 - 3,744 Mscf/hr EU ID 30 - 3,903 Mscf/hr EU ID 31 - 126 Mscf/hr EU ID 32 - 2,305 Mscf/hr EU ID 33 - 2,085 Mscf/hr

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

FORM B5

Emission Unit Detail Form - Miscellaneous Emission Units

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standard	Do not cause or allow visible emissions, excluding condensed water vapor, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes.	Monitor, record, and report in accordance with Condition 1.3.
AQ0059TVP03, Rev. 2 – Condition 7	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standard	Do not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 7.3.
AQ0059TVP03, Rev. 2 – Condition 11	18 AAC 50.055(c)	Sulfur Compound Emissions Standard	Do not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14 through 16.
AQ0059TVP03, Rev. 2 – Condition 50	18 AAC 50.346(b)(5)	Good Air Pollution Control Practices	Perform regular maintenance considering the manufacturers or the operator’s maintenance procedures; keep records of any maintenance that would have a significant effect on emissions; and keep a copy of either the manufacturer’s or the operator’s maintenance procedures.	Yes.	Annual Compliance Audit.

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

FORM B5

Emission Unit Detail Form - Miscellaneous Emission Units

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

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

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

FORM B5
Emission Unit Detail Form - Miscellaneous Emission Units

Permit Number: AQ0059TVP02, Rev. 3

1.	Emission Unit ID Number // Operating Scenario	36 & 37 // Base Scenario
2.	Date installation/construction commenced	Pre-1997
3.	Date installed	Pre-1997
4.	Emission Unit serial number	EU ID 36 – Unknown (S-V-8580) EU ID 37 – Unknown (S-V-9050)
5.	Special control requirements? [if yes, describe]	No
6.	Description of process: CIGGS1 and CIGGS2 Dehydration Units - Triethylene Glycol (TEG) Regenerator Vents	
7.	Continuous or batch process? [if batch, maximum batches per hour]	Continuous

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

Material	Maximum design capacity (lbs/batch or lbs/hr)
Platform Gas	105 MMscf/day, each

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

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

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

FORM B5

Emission Unit Detail Form - Miscellaneous Emission Units

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standard	Do not cause or allow visible emissions, excluding condensed water vapor, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 7	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standard	Do not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 11	18 AAC 50.055(c)	Sulfur Compound Emissions Standard	Do not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 33.2	40 CFR 63.764(a) & Table 2, Subpart HH	NESHAP Subpart A General Requirements	Comply with the applicable requirements of Subpart A in accordance with the provisions for applicability in Subpart HH, Table 2.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 34.2	40 CFR 63.760(c), Subpart HH	NESHAP Subpart HH Major Source Determination	Update the major source determination within 1 year of the prior determination, and each year thereafter, using gas composition data measured during the preceding 12 months.	Yes.	Monitor, record, and report in accordance with Conditions 34.1, and 34.6 through 34.9, as applicable.
AQ0059TVP03, Rev. 2 – Condition 34.3	40 CFR 63.764(d) & (e), Subpart HH	NESHAP Subpart HH General Standards	Determine the optimum glycol circulation rate using the equation in 40 CFR 63.764(d)(2)(i) if the unit is not exempt from the requirements.	Yes.	EU IDs 36 and 37 are affected units under 40 CFR 63 Subpart HH. Initial notification was submitted February 28, 2011. The unit is operated below the calculated optimum glycol circulation rate.

FORM B5

Emission Unit Detail Form - Miscellaneous Emission Units

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 34.5	40 CFR 63.764(j), Subpart HH	NESHAP Subpart HH Good Air Pollution Control Practices	At all times operate and maintain the unit, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.	Yes.	Annual Compliance Audit.

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

FORM B5

Emission Unit Detail Form - Miscellaneous Emission Units

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

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart HH, 63.762, 63.765, 63.766, 63.769, 63.771, 63.772 [except (b)], 63.774 [except (a), (b)(1), (b)(2), (d), & (f)], 63.775 [except (a), (c)(1), (d)(7), (d)(9), (d)(10), & (f)]	The compressor site at the Swanson River Field is an area source of HAPs emissions not located within an UA offset plus UC boundary.

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

FORM B5
Emission Unit Detail Form - Miscellaneous Emission Units

Permit Number: AQ0059TVP03, Rev. 2

1.	Emission Unit ID Number // Operating Scenario	38 & 39 // Base Scenario
2.	Date installation/construction commenced	Pre-November 9, 2006
3.	Date installed	Pre-November 9, 2006
4.	Emission Unit serial number	Unknown
5.	Special control requirements? [if yes, describe]	No
6.	Description of process: EU ID 38 - Gasoline Dispensing Facility located at the Shop EU ID 39 - Gasoline Dispensing Facility located at the Pipe and Supply Yard	
7.	Continuous or batch process? [if batch, maximum batches per hour]	Continuous

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

Material	Maximum design capacity (lbs/batch or lbs/hr)
Gasoline	< 100,000 gal/month, each

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

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

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

FORM B5

Emission Unit Detail Form - Miscellaneous Emission Units

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 33.3	40 CFR 63.11130 & Table 3, Subpart CCCCC	NESHAP Subpart A General Requirements	Comply with the applicable requirements of Subpart A in accordance with the provisions for applicability in Subpart CCCCC, Table 3.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 36.1	40 CFR 63.11111(e), Subpart CCCCC	Threshold Level	Demonstrate that the monthly throughput is less than 10,000- or the 100,000-gallon threshold level, as applicable.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 36.2	40 CFR 63.11115(a), Subpart CCCCC	NESHAP Subpart CCCCC Good Air Pollution Control Practices	At all times operate and maintain the unit in a manner consistent with safety and good air pollution control practices for minimizing emissions.	Yes.	Annual Compliance Audit. Keep records as specified in Condition 36.8.
AQ0059TVP03, Rev. 2 – Condition 36.3	40 CFR 63.11116(a), Subpart CCCCC	NESHAP Subpart CCCCC Good Air Pollution Control Practices	Do not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following: <ul style="list-style-type: none"> - Minimize gasoline spills; - Clean up spills as expeditiously as practicable; - Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use; - Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators. 	Yes.	Annual Compliance Audit. Keep records as specified in Condition 36.5.

FORM B5

Emission Unit Detail Form - Miscellaneous Emission Units

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 36.4	40 CFR 63.11117(b), Subpart CCCCCC	NESHAP Subpart CCCCCC Good Air Pollution Control Practices	<p>Only load gasoline into storage tanks at your facility by utilizing submerged filling and as specified below. The distance shall be measured from the point in the opening of the submerged fill pipe that is the greatest distance from the bottom of the storage tank.</p> <p>- Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the tank.</p>	Yes.	Annual Compliance Audit.

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

FORM B5

Emission Unit Detail Form - Miscellaneous Emission Units

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

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 63 Subpart CCCCCC, 63.11118, 63.11120, & 63.11126	Each Gasoline Dispensing Facility (GDF) has a gasoline throughput of less than 100,000 gallons per month. The reporting provisions do not apply to GDFs with a gasoline throughput of less than 100,000 gallons per month. This shield is applicable only if the gasoline throughput for each GDF is less than 100,000 gallons per month.
40 CFR 63 Subpart CCCCCC, 63.11117(b)(1) & (b)(3)	Submerged filled pipes were installed at each GDF after November 9, 2006.
40 CFR 63 Subpart CCCCCC, 63.11117(c)	Hilcorp does not operate any gasoline tanks less than 250 gallons at Swanson River.

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

FORM B2

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

Permit Number: AQ0059TVP03, Rev. 2

1.	Emission Unit ID Number // Operating Scenario	40 & 41 // Base Scenario
2.	Date installation/construction commenced ¹	June 21, 2007
3.	Date installed	After June 21, 2007
4.	Emission Unit serial number	EU ID 40 – Unknown (S-RCP-EMER01) EU ID 41 – Unknown (S-RCP-EMER02)
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Generac Guardian RV
7.	Type of combustion device	Gasoline-Fired Emergency Engines
8.	Rated design capacity (horsepower rating for engines)	N/A
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	19 kW, each

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

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

Fuel	Maximum hourly firing rate (specify units)
Gasoline	Approximately 1.6 gal/hr, each

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A
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FORM B2

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

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standard	Do not cause or allow visible emissions, excluding condensed water vapor, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes.	Monitor, record, and report in accordance with Condition 1.4.
AQ0059TVP03, Rev. 2 – Condition 7	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standard	Do not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 7.4.
AQ0059TVP03, Rev. 2 – Condition 11	18 AAC 50.055(c)	Sulfur Compound Emissions Standard	Do not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 12 and 13.
AQ0059TVP03, Rev. 2 – Condition 18	AQ0059TVP02, Rev. 3, Condition 12	Hours of Operation Limit	Limit the operation of EU IDs 40 and 41 to no more than 500 hours each in any consecutive 12-month period.	Yes.	Monitor, record, and report in accordance with Conditions 18.1 through 18.3.
N/A	40 CFR 63.6590(a)(2)(iii), (c)	40 CFR 63 Subpart ZZZZ Requirements	A new RICE located at an area source must meet the requirements of this part by meeting the requirements of 40 CFR 60 Subpart JJJJ for spark ignition engines. No further requirements apply for such engines under this part.	Yes.	Annual Compliance Audit. <i>See Permit Shield below.</i>

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

FORM B2

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

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

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subpart JJJJ	EU IDs 40 and 41 commenced construction after June 12, 2006 but were manufactured prior to the July 1, 2008 applicability date for engines with a maximum engine power less than 500 hp.
40 CFR 63 Subpart ZZZZ, 63.6600, 63.6601, 63.6602, 63.6610, & 63.6611	Swanson River Field is not a major source of HAPs.

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

FORM B2

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

Permit Number: AQ0059TVP03, Rev. 2

1.	Emission Unit ID Number // Operating Scenario	43 // Base Scenario
2.	Date installation/construction commenced ¹	2019
3.	Date installed	2019
4.	Emission Unit serial number	Unknown
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Cummins C20N6
7.	Type of combustion device	Fuel Gas-Fired Emergency Engine
8.	Rated design capacity (horsepower rating for engines)	40 hp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	20 ekW

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

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

Fuel	Maximum hourly firing rate (specify units)
Fuel Gas	Approximately 0.3 Mscf/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A
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FORM B2

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

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standard	Do not cause or allow visible emissions, excluding condensed water vapor, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes.	Monitor, record, and report in accordance with Condition 1.2.
AQ0059TVP03, Rev. 2 – Condition 7	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standard	Do not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 7.2.
AQ0059TVP03, Rev. 2 – Condition 11	18 AAC 50.055(c)	Sulfur Compound Emissions Standard	Do not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14 through 16.
AQ0059TVP03, Rev. 2 – Condition 29	40 CFR 60.12, Subpart A	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment, or process that conceals emissions.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Conditions 30.1 & 30.2	40 CFR 60.4233(d), 60.4234, Table 1 of Subpart JJJJ	40 CFR 60 Subpart JJJJ Emission Standards	Over the entire life of the engine comply with the following emission standards: - NO _x + HC: 10 g/hp-hr - CO: 387 g/hp-hr	Yes.	Monitor, record, and report in accordance with Conditions 30.4 through 30.8. <i>Note: EU ID 43 is certified and complies with EPA emissions regulations.</i>
AQ0059TVP03, Rev. 2 – Condition 30.3	40 CFR 60.4237(c)	40 CFR 60 Subpart JJJJ General Requirements	Install a non-resettable hour meter upon startup of the emergency engine.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 35.1	40 CFR 63.6590(c)	40 CFR 63 Subpart ZZZZ General Requirements	Meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR part 60 subpart JJJJ. No further requirements apply under 40 CFR 63.	Yes.	Annual Compliance Audit.

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

FORM B2

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

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

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subpart IIII	EU ID 43 is a spark-ignition engine and not a compression-ignition engine per 40 CFR 60.4200(a).

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

FORM B2

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

Permit Number: AQ0059TVP03, Rev. 2

1.	Emission Unit ID Number // Operating Scenario	44 // Base Scenario
2.	Date installation/construction commenced ¹	2023
3.	Date installed	2023
4.	Emission Unit serial number	Unknown
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Generac RG036
7.	Type of combustion device	Fuel Gas-Fired Emergency Engine
8.	Rated design capacity (horsepower rating for engines)	N/A
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	36 ekW

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

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

Fuel	Maximum hourly firing rate (specify units)
Fuel Gas	0.73 Mscf/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A
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FORM B2

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

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
N/A	18 AAC 50.055(a)(1)	Visible Emissions Standard	Do not cause or allow visible emissions, excluding condensed water vapor, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes.	Monitor, record, and report in accordance with Condition 1.2.
N/A	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standard	Do not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 7.2.
N/A	18 AAC 50.055(c)	Sulfur Compound Emissions Standard	Do not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14 through 16.
N/A	40 CFR 60.12, Subpart A	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment, or process that conceals emissions.	Yes.	Annual Compliance Audit.
N/A	40 CFR 60.4233(d), 60.4234, Table 1 of Subpart JJJJ	40 CFR 60 Subpart JJJJ Emission Standards	Over the entire life of the engine comply with the following emission standards: - NO _x + HC: 10 g/hp-hr - CO: 387 g/hp-hr	Yes.	Monitor, record, and report in accordance with Conditions 30.4 through 30.8. <i>Note: EU ID 44 is certified and complies with EPA emissions regulations.</i>
N/A	40 CFR 60.4237(c)	40 CFR 60 Subpart JJJJ General Requirements	Install a non-resettable hour meter upon startup of the emergency engine.	Yes.	Annual Compliance Audit.
N/A	40 CFR 63.6590(c)	40 CFR 63 Subpart ZZZZ General Requirements	Meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR part 60 subpart JJJJ. No further requirements apply under 40 CFR 63.	Yes.	Annual Compliance Audit.

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

FORM B2

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

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

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subpart IIII	EU ID 44 is a spark-ignition engine and not a compression-ignition engine per 40 CFR 60.4200(a).

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

FORM B2

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

Permit Number: AQ0059TVP03, Rev. 2

1.	Emission Unit ID Number // Operating Scenario	45 // Base Scenario
2.	Date installation/construction commenced ¹	2023
3.	Date installed	2023
4.	Emission Unit serial number	Unknown
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	Briggs & Stratton PP20
7.	Type of combustion device	Fuel Gas-Fired Emergency Engine
8.	Rated design capacity (horsepower rating for engines)	N/A
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	20 ekW

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

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

Fuel	Maximum hourly firing rate (specify units)
Fuel Gas	0.26 Mscf/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A
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FORM B2

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

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
N/A	18 AAC 50.055(a)(1)	Visible Emissions Standard	Do not cause or allow visible emissions, excluding condensed water vapor, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes.	Monitor, record, and report in accordance with Condition 1.2.
N/A	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standard	Do not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 7.2.
N/A	18 AAC 50.055(c)	Sulfur Compound Emissions Standard	Do not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14 through 16.
N/A	40 CFR 60.12, Subpart A	NSPS Subpart A Concealment of Emissions	Do not build, erect, install, or use any article, machine, equipment, or process that conceals emissions.	Yes.	Annual Compliance Audit.
N/A	40 CFR 60.4233(d), 60.4234, Table 1 of Subpart JJJJ	40 CFR 60 Subpart JJJJ Emission Standards	Over the entire life of the engine comply with the following emission standards: - NO _x + HC: 10 g/hp-hr - CO: 387 g/hp-hr	Yes.	Monitor, record, and report in accordance with Conditions 30.4 through 30.8. <i>Note: EU ID 45 is certified and complies with EPA emissions regulations.</i>
N/A	40 CFR 60.4237(c)	40 CFR 60 Subpart JJJJ General Requirements	Install a non-resettable hour meter upon startup of the emergency engine.	Yes.	Annual Compliance Audit.
N/A	40 CFR 63.6590(c)	40 CFR 63 Subpart ZZZZ General Requirements	Meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR part 60 subpart JJJJ. No further requirements apply under 40 CFR 63.	Yes.	Annual Compliance Audit.

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

FORM B2

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

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

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subpart IIII	EU ID 45 is a spark-ignition engine and not a compression-ignition engine per 40 CFR 60.4200(a).

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

FORM B1

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

Permit Number: AQ0059TVP03, Rev. 2

1.	Emission Unit ID Number // Operating Scenario	46 // Base Scenario
2.	Date installation/construction commenced	Unknown
3.	Date installed	Unknown
4.	Emission Unit serial number	Unknown (S-HTR-SANDPIT)
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Unknown
7.	Description of emission unit, including type of boiler/heater and firing method: Fuel Gas-Fired Sand Pit Burner	
8.	Rated design capacity (heat input, MMBtu/hr)	5 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	N/A
10.	Maximum steam pressure (psi)	N/A
11.	Maximum steam temperature (°F)	N/A

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

Fuel	Maximum hourly firing rate (specify units)
Fuel Gas	Approximately 5.0 Mscf/hr

13.	Is waste heat utilized for any purpose? If yes, describe: N/A
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FORM B1

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

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 27.1	18 AAC 50.050(a) & 50.055(a)(1)	Insignificant Emission Units: VE Standard	Do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes.	Monitor, record, and report as required in Condition 27.4.
AQ0059TVP03, Rev. 2 – Condition 27.2	18 AAC 50.055(b)(1)	Insignificant Emission Units: PM Standard	Do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes.	Monitor, record, and report as required in Condition 27.4.
AQ0059TVP03, Rev. 2 – Condition 27.3	18 AAC 50.055(c)	Insignificant Emission Units: Sulfur Standard	Do not cause or allow sulfur compound emissions to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report as required in Condition 27.4.

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

FORM B1

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

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

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subparts D, Da	EU ID 46 has a heat input less than 250 MMBtu/hr.
40 CFR 60 Subpart Db	EU ID 46 has a heat input less than 100 MMBtu/hr.
40 CFR 60 Subpart Dc	EU ID 46 has a heat input less than 10 MMBtu/hr.
40 CFR 63 Subpart JJJJJ	EU ID 46 fires only fuel gas.

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

FORM B1

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

Permit Number: AQ0059TVP03, Rev. 2

1.	Emission Unit ID Number // Operating Scenario	Drill Rig Boilers and Heater // Base Scenario
2.	Date installation/construction commenced	Unknown
3.	Date installed	Unknown
4.	Emission Unit serial number	TBD
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	TBD
7.	Description of emission unit, including type of boiler/heater and firing method: Diesel-Fired Drill Rig Boilers (x2) and Heater	
8.	Rated design capacity (heat input, MMBtu/hr)	Boiler (x2) – 6.69 MMBtu/hr, each Heater – 4.2 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	N/A
10.	Maximum steam pressure (psi)	N/A
11.	Maximum steam temperature (°F)	N/A

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

Fuel	Maximum hourly firing rate (specify units)
Diesel – Boiler (x2)	Approximately 48.8 gal/hr, each
Diesel – Heater	Approximately 30.7 gal/hr

13.	Is waste heat utilized for any purpose? If yes, describe: N/A
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FORM B1

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

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standard	Do not cause or allow visible emissions, excluding condensed water vapor, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes.	Monitor, record, and report in accordance with Condition 1.1.
AQ0059TVP03, Rev. 2 – Condition 7	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standard	Do not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 7.1.
AQ0059TVP03, Rev. 2 – Condition 11	18 AAC 50.055(c)	Sulfur Compound Emissions Standard	Do not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 12 and 13.
AQ0059TVP03, Rev. 2 – Condition 17	Permit to Operate No. 9423-AA009, Condition 5	Pre-construction Permit Requirements	Do not burn any diesel fuel with sulfur content greater than 0.5% in any equipment under Section 12 and any substitute equipment.	Yes.	Monitor, record, and report in accordance with Condition 17.1.
AQ0059TVP03, Rev. 2 – Condition 22	Operating Permit No. 061TVP01, Rev. 2, Condition 6	Drilling Site Restrictions	Limit the drilling and well testing operations to no more than 24 months per drill site within the Swanson River Field. Extension beyond this time frame will require Department Approval.	Yes.	Monitor, record, and report in accordance with Condition 23.
AQ0059TVP03, Rev. 2 – Condition 23	Permit to Operate No. 9423-AA009, Exhibit F	Relocation of Drilling Rig	Notify the Department prior to moving a drilling rig onto the Swanson River Field. Use the form in Section 11 to make this notification.	Yes.	Annual Compliance Audit.

FORM B1

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 24	Operating Permit No. 061TVP01, Rev. 2, Condition 8	Operating Limits	Use a drilling rig drawn from the pool of rigs in Section 12. The Permittee may substitute equipment provided the overall rated power capacity of the rig does not exceed that of the Nabors 160 rig.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 25	Permit to Operate No. 9423-AA009, Condition 4 & Exhibit B	Hours of Operation Limits	Limit the hours of operation for each engine, boiler, and heater (except flares) to 2,160 hours per year per drill site, on a 12-month rolling basis. The operational limit shall apply to any rig used.	Yes.	Monitor, record, and report in accordance with Conditions 25.1 through 25.3.

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

FORM B1

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

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

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subpart D	Units have a heat input less than 250 MMBtu/hr.
40 CFR 60 Subpart Da	Units have a heat input less than 250 MMBtu/hr.
40 CFR 60 Subpart Db	Units have a heat input less than 100 MMBtu/hr.
40 CFR 60 Subpart Dc	Units has a heat input less than 10 MMBtu/hr.
40 CFR 63 Subpart JJJJJ	Units are temporary.

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

FORM B2

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

Permit Number: AQ0059TVP03, Rev. 2

1.	Emission Unit ID Number // Operating Scenario	Drill Rig Engines // Base Scenario
2.	Date installation/construction commenced ¹	Unknown
3.	Date installed	Unknown
4.	Emission Unit serial number	TBD
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer and model number	TBD
7.	Type of combustion device	Diesel-Fired Engines (Nonroad)
8.	Rated design capacity (horsepower rating for engines)	3,320 kW, total
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

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

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

Fuel	Maximum hourly firing rate (specify units)
Diesel	Approximately 227.5 gal/hr, total

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: N/A
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FORM B2

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

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 17	Permit to Operate No. 9423-AA009, Condition 5	Pre-construction Permit Requirements	Do not burn any diesel fuel with sulfur content greater than 0.5% in any equipment under Section 12 and any substitute equipment.	Yes.	Monitor, record, and report in accordance with Condition 17.1.
AQ0059TVP03, Rev. 2 – Condition 22	Operating Permit No. 061TVP01, Rev. 2, Condition 6	Drilling Site Restrictions	Limit the drilling and well testing operations to no more than 24 months per drill site within the Swanson River Field. Extension beyond this time frame will require Department Approval.	Yes.	Monitor, record, and report in accordance with Condition 23.
AQ0059TVP03, Rev. 2 – Condition 23	Permit to Operate No. 9423-AA009, Exhibit F	Relocation of Drilling Rig	Notify the Department prior to moving a drilling rig onto the Swanson River Field. Use the form in Section 11 to make this notification.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 24	Operating Permit No. 061TVP01, Rev. 2, Condition 8	Operating Limits	Use a drilling rig drawn from the pool of rigs in Section 12. The Permittee may substitute equipment provided the overall rated power capacity of the rig does not exceed that of the Nabors 160 rig.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 25	Permit to Operate No. 9423-AA009, Condition 4 & Exhibit B	Hours of Operation Limits	Limit the hours of operation for each engine, boiler, and heater (except flares) to 2,160 hours per year per drill site, on a 12-month rolling basis. The operational limit shall apply to any rig used.	Yes.	Monitor, record, and report in accordance with Conditions 25.1 through 25.3.

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

FORM B2

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

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

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subpart IIII	Drill rig engines are nonroad and not stationary emissions units.
40 CFR 63 Subpart ZZZZ	Drill rig engines are nonroad and not stationary emissions units.

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

FORM B5
Emission Unit Detail Form - Miscellaneous Emission Units

Permit Number: AQ0059TVP03, Rev. 2

1.	Emission Unit ID Number // Operating Scenario	Drill Rig Test Flare // Base Scenario
2.	Date installation/construction commenced	Unknown
3.	Date installed	Unknown
4.	Emission Unit serial number	Unknown
5.	Special control requirements? [if yes, describe]	No
6.	Description of process: Drill Rig Test Flare	
7.	Continuous or batch process? [if batch, maximum batches per hour]	Continuous

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

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

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

Product	Maximum design capacity (lbs/batch or lbs/hr)
Produced Gas	300 MMscf/yr

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

FORM B5

Emission Unit Detail Form - Miscellaneous Emission Units

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

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standard	Do not cause or allow visible emissions, excluding condensed water vapor, to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes.	Monitor, record, and report in accordance with Condition 1.3.
AQ0059TVP03, Rev. 2 – Condition 7	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standard	Do not cause or allow particulate matter emitted to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 7.3.
AQ0059TVP03, Rev. 2 – Condition 11	18 AAC 50.055(c)	Sulfur Compound Emissions Standard	Do not cause or allow sulfur compound emissions, expressed as SO ₂ , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14 through 16.
AQ0059TVP03, Rev. 2 – Condition 22	Operating Permit 061TVP01, Rev. 2, Condition 6	Drilling Site Restrictions	Limit the drilling and well testing operations to no more than 24 months per drill site within the Swanson River Field. Extension beyond this time frame will require Department Approval.	Yes.	Monitor, record, and report in accordance with Condition 23.
AQ0059TVP03, Rev. 2 – Condition 23	Permit to Operate 9423-AA009, Exhibit F	Relocation of Drilling Rig	Notify the Department prior to moving a drilling rig onto the Swanson River Field. Use the form in Section 11 to make this notification.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 24	Operating Permit 061TVP01, Rev. 2, Condition 8	Operating Limits	Use a drilling rig drawn from the pool of rigs in Section 12. The Permittee may substitute equipment provided the overall rated power capacity of the rig does not exceed that of the Nabors 160 rig.	Yes.	Annual Compliance Audit.

FORM B5

Emission Unit Detail Form - Miscellaneous Emission Units

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0059TVP03, Rev. 2 – Condition 26	Permit to Operate 9423-AA009, Exhibit B	Rig Test Flare Operation Limit	Limit the operation of the rig test flare(s) listed in Section 12 to 30 MMscf per day per drill site.	Yes.	Monitor, record, and report in accordance with Conditions 26.1 and 26.2.

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

FORM B5

Emission Unit Detail Form - Miscellaneous Emission Units

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

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

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



Section C

Pollution Control Devices

Not Applicable



Section D

Emissions Summary

Forms D1:	Potential Annual Emissions (After Controls/Limitations)
Forms D2:	Potential Annual Emissions (Before Controls/Limitations)
Forms D3:	Expected Actual Annual Emissions (After Controls/Limitations)

Table D-1a. Emissions Unit Inventory Summary - Limited Potential Emissions
Hilcorp Alaska, LLC - Swanson River Field

EU ID	Emissions Unit Name	Limited Potential Emissions (tpy)						
		NO _x	CO	PM ₁₀	VOC	SO ₂	CO _{2e}	HAPs ¹
Significant Units								
1	Plant Boiler F-201	2.73	2.30	0.21	0.15	0.12	3,218	5.2E-02
2	Refuse Incinerator	0.15	1.50	1.13	1.13	0.19	153	0.50
		0.35	0.29	2.6E-02	1.9E-02	1.5E-02	410	6.6E-03
8	Compressor Drive K-11	419.54	51.09	6.39	15.88	0.55	15,497	1.23
9	Compressor Drive K-12	419.54	51.09	6.39	15.88	0.55	15,497	1.23
10	Compressor Drive K-13	419.54	51.09	6.39	15.88	0.55	15,497	1.23
11	Compressor Drive K-14	419.54	51.09	6.39	15.88	0.55	15,497	1.23
12	Compressor Drive K-15	888.61	108.20	13.54	33.64	1.17	32,825	2.61
13	Compressor Drive K-17							
14	Compressor Drive K-18							
24/25	Flare (150#)/Main Flare (900#)							
27	Flare 1-27	1.71	7.79	0.67	16.59	0.11	2,943	7.4E-02
28	Flare 1-33							
29	Flare 1-4							
30	Flare 1-9							
31	Flare 2-15							
32	Flare 3-4							
33	Flare 3-9							
36	TEG Regenerator Vent	0	0	0	11.74	0	32	8.60
37	TEG Regenerator Vent	0	0	0	11.74	0	32	
38	Gasoline Dispensing Facility	0	0	0	14.52	0	0	0.83
39	Gasoline Dispensing Facility	0	0	0	14.52	0	0	0.83
40	Generator	7.0E-02	4.4E-02	4.6E-03	9.6E-02	2.9E-03	8	2.0E-04
41	Generator	7.0E-02	4.4E-02	4.6E-03	9.6E-02	2.9E-03	8	2.0E-04
43	Emergency Generator	0.18	3.0E-01	1.6E-03	2.4E-03	3.4E-04	9	2.6E-03
44	Emergency Generator	0.51	19.57	3.6E-03	0.51	7.7E-04	21	6.0E-03
45	Emergency Generator	0.18	6.97	1.3E-03	0.18	2.7E-04	8	2.1E-03
46	Sand Pit Burner	2.18	1.83	0.17	0.12	9.2E-02	2,564	4.1E-02
Drill Rig Units								
N/A	Drilling Boiler	4.28	1.07	0.51	7.3E-02	14.97	4,794	1.1E-02
N/A	Drilling Boiler	4.28	1.07	0.51	7.3E-02	14.97	4,794	1.1E-02
N/A	Drilling Heater	2.69	0.67	0.32	4.6E-02	9.40	3,010	6.8E-03
N/A	Drilling Test Flare	10.26	46.75	4.00	99.53	0.63	17,660	0.44
Significant Unit Total		2,596.39	402.74	46.66	268.29	43.89	134,479	18.95
Insignificant Units								
42a	Boiler	1.18	0.99	8.9E-02	6.5E-02	5.0E-02	1,385	2.2E-02
N/A	Microturbines (x2)	0.23	0.57	4.6E-02	1.5E-02	2.9E-02	813	7.1E-03
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02
N/A	Space Heater	0.13	0.11	9.9E-03	7.2E-03	5.5E-03	154	2.5E-03
N/A	Water Heater	9.6E-02	8.1E-02	7.3E-03	5.3E-03	4.0E-03	113	1.8E-03
N/A	Space Heaters (x2)	8.7E-03	7.3E-03	6.6E-04	4.8E-04	3.7E-04	10	1.6E-04
N/A	Space Heater	3.5E-02	3.0E-02	2.7E-03	1.9E-03	1.5E-03	42	6.7E-04
N/A	Space Heater	0.10	8.5E-02	7.6E-03	5.5E-03	4.2E-03	118	1.9E-03
N/A	Space Heaters (x4)	0.13	0.11	9.9E-03	7.2E-03	5.5E-03	154	2.5E-03
N/A	Space Heaters (x2)	0.14	0.12	1.1E-02	7.7E-03	5.9E-03	164	2.6E-03
N/A	Space Heater	0.14	0.12	1.1E-02	7.9E-03	6.0E-03	168	2.7E-03
N/A	Space Heaters (x2)	0.17	0.15	1.3E-02	9.6E-03	7.3E-03	205	3.3E-03
N/A	Space Heaters (x2)	0.35	0.29	2.6E-02	1.9E-02	1.5E-02	410	6.6E-03
N/A	Space Heater	0.14	0.11	1.0E-02	7.5E-03	5.7E-03	160	2.6E-03
N/A	Space Heater	8.7E-02	7.3E-02	6.6E-03	4.8E-03	3.7E-03	103	1.6E-03
N/A	Space Heater	0.13	0.11	9.9E-03	7.2E-03	5.5E-03	154	2.5E-03
N/A	Reboilers (x2)	0.44	0.37	3.3E-02	2.4E-02	1.8E-02	513	8.2E-03
N/A	Heater	0.65	0.55	5.0E-02	3.6E-02	2.8E-02	769	1.2E-02
N/A	Space Heater	6.4E-02	1.6E-02	7.6E-03	1.1E-03	0.22	72	1.6E-04
N/A	Portable Heater	0.19	4.8E-02	2.3E-02	3.3E-03	0.67	215	4.9E-04
N/A	Pressure Washer	0.26	6.4E-02	3.0E-02	4.3E-03	0.90	287	6.5E-04
N/A	Portable Heaters (x3)	0.96	0.24	0.11	1.6E-02	3.36	1,075	2.4E-03
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02
N/A	Oil Heaters (x2)	3.49	2.93	0.26	0.19	0.15	4,103	6.6E-02
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02
N/A	Line Heaters (x61)	26.97	22.65	2.05	1.48	1.14	31,748	0.51
N/A	Line Heater	0.44	0.37	3.3E-02	2.4E-02	1.8E-02	513	8.2E-03
N/A	Crude Oil Tank 22	0	0	0	0.43	0	0	2.8E-02
N/A	Produced Water Tanks (x2)	0	0	0	0.21	0	0	1.4E-02
N/A	Produced Water Tank	0	0	0	0.11	0	0	7.0E-03
N/A	Jet A/Diesel Tanks (x3)	0	0	0	1.1E-03	0	0	1.2E-04
N/A	Jet A/Diesel Tank	0	0	0	3.7E-04	0	0	3.9E-05
N/A	Jet A/Diesel Tanks (x2)	0	0	0	7.4E-04	0	0	7.9E-05
N/A	Diesel Fuel Tank	0	0	0	3.7E-04	0	0	3.9E-05
N/A	Kerosene (Jet A) Tank	0	0	0	3.7E-04	0	0	3.9E-05
N/A	Gasoline Tank	0	0	0	5.7E-02	0	0	3.7E-03
N/A	Gasoline Tank	0	0	0	5.7E-02	0	0	3.7E-03
N/A	Gasoline Tank	0	0	0	0	0	0	0
N/A	Gasoline Tank	0	0	0	0	0	0	0
N/A	Xylene Tank	0	0	0	3.8E-03	0	0	3.8E-03
N/A	Process Flare	4.5E-04	2.1E-03	1.8E-04	4.4E-03	1.1E-04	1	7.8E-06
Insignificant Unit Total		48.71	40.43	3.79	3.50	7.16	57,809	0.96
Total (Significant and Insignificant)		2645.10	443.17	50.45	271.79	51.04	192,289	19.91
Major/Minor		Major	Major	Minor	Major	N/A	N/A	N/A
Total Assessable Emissions					3,461.55			

Notes:

¹ The highest individual HAP is benzene with HAP emissions of 3.97 tpy.

**Table D-1b. Emission Unit Inventory Summary - Unlimited Potential Emissions
Hilcorp Alaska, LLC - Swanson River Field**

EU ID	Emissions Unit Name	Unlimited Potential Emissions (tpy)							
		NO _x	CO	PM ₁₀	VOC	SO ₂	CO ₂ e	HAPs	
Significant Units									
1	Plant Boiler F-201	2.73	2.30	0.21	0.15	0.12	3,218	5.2E-02	
2	Refuse Incinerator	0.66	6.57	4.93	4.93	0.82	668	2.18	
		0.35	0.29	2.6E-02	1.9E-02	1.5E-02	410	6.6E-03	
8	Compressor Drive K-11	419.54	51.09	6.39	15.88	0.55	15,497	1.23	
9	Compressor Drive K-12	419.54	51.09	6.39	15.88	0.55	15,497	1.23	
10	Compressor Drive K-13	419.54	51.09	6.39	15.88	0.55	15,497	1.23	
11	Compressor Drive K-14	419.54	51.09	6.39	15.88	0.55	15,497	1.23	
12	Compressor Drive K-15	419.54	51.09	6.39	15.88	0.55	15,497	1.23	
13	Compressor Drive K-17	444.31	54.10	6.77	16.82	0.59	16,412	1.31	
14	Compressor Drive K-18	444.31	54.10	6.77	16.82	0.59	16,412	1.31	
24/25	Flare (150#)/Main Flare (900#)	4.78	21.78	1.86	46.37	0.29	8,227	169.93	
27	Flare 1-27	103.31	470.97	40.25	1,002.71	6.36	177,902		
28	Flare 1-33	181.17	825.90	70.59	1,758.38	11.16	311,973		
29	Flare 1-4	1,121.13	5,111.05	436.82	10,881.60	69.07	1,930,626		
30	Flare 1-9	1,168.75	5,328.11	455.37	11,343.72	72.00	2,012,616		
31	Flare 2-15	37.73	172.01	14.70	366.21	2.32	64,973		
32	Flare 3-4	690.23	3,146.63	268.93	6,699.28	42.52	1,188,593		
33	Flare 3-9	624.35	2,846.30	243.26	6,059.87	38.46	1,075,148		
36	TEG Regenerator Vent	0	0	0	11.74	0	32		8.60
37	TEG Regenerator Vent	0	0	0	11.74	0	32		
38	Gasoline Dispensing Facility	0	0	0	14.52	0	0	0.83	
39	Gasoline Dispensing Facility	0	0	0	14.52	0	0	0.83	
40	Generator	7.0E-02	4.4E-02	4.6E-03	9.6E-02	2.9E-03	8	2.0E-04	
41	Generator	7.0E-02	4.4E-02	4.6E-03	9.6E-02	2.9E-03	8	2.0E-04	
43	Emergency Generator	0.18	0.30	1.6E-03	2.4E-03	3.4E-04	9	2.6E-03	
44	Emergency Generator	0.51	19.57	3.6E-03	0.51	7.7E-04	21	6.0E-03	
45	Emergency Generator	0.18	6.97	1.3E-03	0.18	2.7E-04	8	2.1E-03	
46	Sand Pit Burner	2.18	1.83	0.17	0.12	9.2E-02	2,564	4.1E-02	
Drill Rig Units									
N/A	Drilling Boiler	4.28	1.07	0.51	7.3E-02	14.97	4,794	1.1E-02	
N/A	Drilling Boiler	4.28	1.07	0.51	7.3E-02	14.97	4,794	1.1E-02	
N/A	Drilling Heater	2.69	0.67	0.32	4.6E-02	9.40	3,010	6.8E-03	
N/A	Drilling Test Flare	10.26	46.75	4.00	99.53	0.63	17,660	0.44	
Significant Unit Total		6,946.16	18,373.86	1,587.98	38,429.51	287.16	6,917,608	191.72	
Insignificant Units									
42a	Boiler	1.18	0.99	8.9E-02	6.5E-02	5.0E-02	1,385	2.2E-02	
N/A	Microturbines (x2)	0.23	0.57	4.6E-02	1.5E-02	2.9E-02	813	7.1E-03	
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02	
N/A	Space Heater	0.13	0.11	9.9E-03	7.2E-03	5.5E-03	154	2.5E-03	
N/A	Water Heater	9.6E-02	8.1E-02	7.3E-03	5.3E-03	4.0E-03	113	1.8E-03	
N/A	Space Heaters (x2)	8.7E-03	7.3E-03	6.6E-04	4.8E-04	3.7E-04	10	1.6E-04	
N/A	Space Heater	3.5E-02	3.0E-02	2.7E-03	1.9E-03	1.5E-03	42	6.7E-04	
N/A	Space Heater	0.10	8.5E-02	7.6E-03	5.5E-03	4.2E-03	118	1.9E-03	
N/A	Space Heaters (x4)	0.13	0.11	9.9E-03	7.2E-03	5.5E-03	154	2.5E-03	
N/A	Space Heaters (x2)	0.14	0.12	1.1E-02	7.7E-03	5.9E-03	164	2.6E-03	
N/A	Space Heater	0.14	0.12	1.1E-02	7.9E-03	6.0E-03	168	2.7E-03	
N/A	Space Heaters (x2)	0.17	0.15	1.3E-02	9.6E-03	7.3E-03	205	3.3E-03	
N/A	Space Heaters (x2)	0.35	0.29	2.6E-02	1.9E-02	1.5E-02	410	6.6E-03	
N/A	Space Heater	0.14	0.11	1.0E-02	7.5E-03	5.7E-03	160	2.6E-03	
N/A	Space Heater	8.7E-02	7.3E-02	6.6E-03	4.8E-03	3.7E-03	103	1.6E-03	
N/A	Space Heater	0.13	0.11	9.9E-03	7.2E-03	5.5E-03	154	2.5E-03	
N/A	Reboilers (x2)	0.44	0.37	3.3E-02	2.4E-02	1.8E-02	513	8.2E-03	
N/A	Heater	0.65	0.55	5.0E-02	3.6E-02	2.8E-02	769	1.2E-02	
N/A	Space Heater	6.4E-02	1.6E-02	7.6E-03	1.1E-03	0.22	72	1.6E-04	
N/A	Portable Heater	0.19	4.8E-02	2.3E-02	3.3E-03	0.67	215	4.9E-04	
N/A	Pressure Washer	0.26	6.4E-02	3.0E-02	4.3E-03	0.90	287	6.5E-04	
N/A	Portable Heaters (x3)	0.96	0.24	0.11	1.6E-02	3.36	1,075	2.4E-03	
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02	
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02	
N/A	Oil Heaters (x2)	3.49	2.93	0.26	0.19	0.15	4,103	6.6E-02	
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02	
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02	
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02	
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02	
N/A	Line Heaters (x61)	26.97	22.65	2.05	1.48	1.14	31,748	0.51	
N/A	Line Heater	0.44	0.37	3.3E-02	2.4E-02	1.8E-02	513	8.2E-03	
N/A	Crude Oil Tank 22	0	0	0	0.43	0	0	2.8E-02	
N/A	Produced Water Tanks (x2)	0	0	0	0.21	0	0	1.4E-02	
N/A	Produced Water Tank	0	0	0	0.11	0	0	7.0E-03	
N/A	Jet A/Diesel Tanks (x3)	0	0	0	1.1E-03	0	0	1.2E-04	
N/A	Jet A/Diesel Tank	0	0	0	3.7E-04	0	0	3.9E-05	
N/A	Jet A/Diesel Tanks (x2)	0	0	0	7.4E-04	0	0	7.9E-05	
N/A	Diesel Fuel Tank	0	0	0	3.7E-04	0	0	3.9E-05	
N/A	Kerosene (Jet A) Tank	0	0	0	3.7E-04	0	0	3.9E-05	
N/A	Gasoline Tank	0	0	0	5.7E-02	0	0	3.7E-03	
N/A	Gasoline Tank	0	0	0	5.7E-02	0	0	3.7E-03	
N/A	Gasoline Tank	0	0	0	0	0	0	0	
N/A	Gasoline Tank	0	0	0	0	0	0	0	
N/A	Xylene Tank	0	0	0	3.8E-03	0	0	3.8E-03	
N/A	Process Flare	4.5E-04	2.1E-03	1.8E-04	4.4E-03	1.1E-04	1	7.8E-06	
Insignificant Unit Total		48.71	40.43	3.79	3.50	7.16	57,809	0.96	
Total (Significant and Insignificant)		6,994.87	18,414.29	1,591.77	38,433.01	294.32	6,975,417	192.68	

Table D-1c. Emission Unit Inventory Summary - Estimated Actual Emissions
Hilcorp Alaska, LLC - Swanson River Field

EU ID	Emissions Unit Name	Estimated Actual Potential Emissions (tpy)						
		NO _x	CO	PM ₁₀	VOC	SO ₂	CO ₂ e	HAPs
Significant Units								
1	Plant Boiler F-201	3.3E-02	2.8E-02	2.5E-03	1.8E-03	1.4E-03	39	6.3E-04
2	Refuse Incinerator	7.5E-03	0.1	5.6E-02	5.6E-02	9.4E-03	8	2.5E-02
		4.1E-03	3.5E-03	3.1E-04	2.3E-04	1.7E-04	5	7.8E-05
8	Compressor Drive K-11	174.04	21.2	2.65	6.59	0.23	6,429	0.51
9	Compressor Drive K-12	282.56	34.4	4.31	10.70	0.37	10,438	0.83
10	Compressor Drive K-13	300.17	36.6	4.57	11.36	0.40	11,088	0.88
11	Compressor Drive K-14	241.99	29.5	3.69	9.16	0.32	8,939	0.71
12	Compressor Drive K-15	51.96	6.3	0.79	1.97	6.9E-02	1,919	0.15
13	Compressor Drive K-17	230.93	28.1	3.52	8.74	0.31	8,530	0.68
14	Compressor Drive K-18	146.94	17.9	2.24	5.56	0.19	5,428	0.43
24/25	Flare (150#)/Main Flare (900#)	1.04	4.7	0.40	10.09	6.4E-02	1,789	4.5E-02
27	Flare 1-27							
28	Flare 1-33							
29	Flare 1-4							
30	Flare 1-9							
31	Flare 2-15							
32	Flare 3-4							
33	Flare 3-9							
36	TEG Regenerator Vent	0	0	0	11.74	0	32	4.30
37	TEG Regenerator Vent	0	0	0		0	32	
38	Gasoline Dispensing Facility	0	0	0	4.98	0	0	0.28
39	Gasoline Dispensing Facility	0	0	0	0	0	0	0
40	Generator	3.2E-03	2.0E-03	2.1E-04	4.4E-03	1.3E-04	0	9.0E-06
41	Generator	3.2E-03	2.0E-03	2.1E-04	4.4E-03	1.3E-04	0	9.0E-06
43	Emergency Generator	9.0E-03	1.5E-02	7.7E-05	1.2E-04	1.7E-05	0	1.3E-04
44	Emergency Generator	0	0	0	0	0	0	0
45	Emergency Generator	0	0	0	0	0	0	0
46	Sand Pit Burner	1.09	0.91	8.3E-02	6.0E-02	4.6E-02	1,282	2.1E-02
Drill Rig Units								
N/A	Drilling Boiler	0.71	0.18	8.5E-02	1.2E-02	2.50	801	1.8E-03
N/A	Drilling Boiler	0.71	0.18	8.5E-02	1.2E-02	2.50	801	1.8E-03
N/A	Drilling Heater	0.45	0.11	5.3E-02	7.6E-03	1.57	503	1.1E-03
N/A	Drilling Test Flare	0	0	0	0	0	0	0
Significant Unit Total		1,432.65	180.20	22.54	81.04	8.58	58,065	8.88
Insignificant Units								
42a	Boiler	1.18	0.99	8.9E-02	6.5E-02	5.0E-02	1,385	2.2E-02
N/A	Microturbines (x2)	0.23	0.57	4.6E-02	1.5E-02	2.9E-02	813	7.1E-03
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02
N/A	Space Heater	0.13	0.11	9.9E-03	7.2E-03	5.5E-03	154	2.5E-03
N/A	Water Heater	9.6E-02	8.1E-02	7.3E-03	5.3E-03	4.0E-03	113	1.8E-03
N/A	Space Heaters (x2)	8.7E-03	7.3E-03	6.6E-04	4.8E-04	3.7E-04	10	1.6E-04
N/A	Space Heater	3.5E-02	3.0E-02	2.7E-03	1.9E-03	1.5E-03	42	6.7E-04
N/A	Space Heater	0.10	8.5E-02	7.6E-03	5.5E-03	4.2E-03	118	1.9E-03
N/A	Space Heaters (x4)	0.13	0.11	9.9E-03	7.2E-03	5.5E-03	154	2.5E-03
N/A	Space Heaters (x2)	0.14	0.12	1.1E-02	7.7E-03	5.9E-03	164	2.6E-03
N/A	Space Heater	0.14	0.12	1.1E-02	7.9E-03	6.0E-03	168	2.7E-03
N/A	Space Heaters (x2)	0.17	0.15	1.3E-02	9.6E-03	7.3E-03	205	3.3E-03
N/A	Space Heaters (x2)	0.35	0.29	2.6E-02	1.9E-02	1.5E-02	410	6.6E-03
N/A	Space Heater	0.14	0.11	1.0E-02	7.5E-03	5.7E-03	160	2.6E-03
N/A	Space Heater	8.7E-02	7.3E-02	6.6E-03	4.8E-03	3.7E-03	103	1.6E-03
N/A	Space Heater	0.13	0.11	9.9E-03	7.2E-03	5.5E-03	154	2.5E-03
N/A	Reboilers (x2)	0.44	0.37	3.3E-02	2.4E-02	1.8E-02	513	8.2E-03
N/A	Heater	0.65	0.55	5.0E-02	3.6E-02	2.8E-02	769	1.2E-02
N/A	Space Heater	0.06	1.6E-02	7.6E-03	1.1E-03	0.22	72	1.6E-04
N/A	Portable Heater	0.19	4.8E-02	2.3E-02	3.3E-03	0.67	215	4.9E-04
N/A	Pressure Washer	0.26	6.4E-02	3.0E-02	4.3E-03	0.90	287	6.5E-04
N/A	Portable Heaters (x3)	0.96	0.24	0.11	1.6E-02	3.36	1,075	2.4E-03
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02
N/A	Oil Heaters (x2)	3.49	2.93	0.26	0.19	0.15	4,103	6.6E-02
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02
N/A	Oil Heater	1.74	1.46	0.13	9.6E-02	7.3E-02	2,052	3.3E-02
N/A	Line Heaters (x61)	26.97	22.65	2.05	1.48	1.14	31,748	0.51
N/A	Line Heater	0.44	0.37	3.3E-02	2.4E-02	1.8E-02	513	8.2E-03
N/A	Crude Oil Tank 22	0	0	0	0.43	0	0	2.8E-02
N/A	Produced Water Tanks (x2)	0	0	0	0.21	0	0	1.4E-02
N/A	Produced Water Tank	0	0	0	0.11	0	0	7.0E-03
N/A	Jet A/Diesel Tanks (x3)	0	0	0	1.1E-03	0	0	1.2E-04
N/A	Jet A/Diesel Tank	0	0	0	3.7E-04	0	0	3.9E-05
N/A	Jet A/Diesel Tanks (x2)	0	0	0	7.4E-04	0	0	7.9E-05
N/A	Diesel Fuel Tank	0	0	0	3.7E-04	0	0	3.9E-05
N/A	Kerosene (Jet A) Tank	0	0	0	3.7E-04	0	0	3.9E-05
N/A	Gasoline Tank	0	0	0	5.7E-02	0	0	3.7E-03
N/A	Gasoline Tank	0	0	0	5.7E-02	0	0	3.7E-03
N/A	Gasoline Tank	0	0	0	0	0	0	0
N/A	Gasoline Tank	0	0	0	0	0	0	0
N/A	Xylene Tank	0	0	0	3.8E-03	0	0	0.0
N/A	Process Flare	4.5E-04	2.1E-03	1.8E-04	4.4E-03	1.1E-04	1	7.8E-06
Insignificant Unit Total		48.71	40.43	3.79	3.50	7.16	57,809	0.96
Total (Significant and Insignificant)		1,481.36	220.63	26.34	84.54	15.74	115,874	9.84

Table D-2a. HAPs Summary - Limited Potential Emissions
Hilcorp Alaska, LLC - Swanson River Field

Hazardous Air Pollutant	Limited Potential Emissions (tpy)																			Total	
	Significant Units													Insignificant Units							
	1	2	8-11	12-14	24-33	36-37	38-39	40-41	43	44	45	46	Drill Boilers	Drill Heater	Drill Flare	Turbines	FG Heaters	Diesel Heaters	Tanks		Flare
Acetaldehyde	----	----	5.3E-02	2.8E-02	1.1E-03	----	----	7.8E-05	2.2E-04	5.1E-04	1.8E-04	----	----	----	6.5E-03	2.8E-04	----	----	----	1.1E-07	8.9E-02
Acrolein	----	----	7.0E-02	3.7E-02	2.5E-04	----	----	9.4E-06	2.1E-04	4.8E-04	1.7E-04	----	----	----	1.5E-03	4.4E-05	----	----	----	2.6E-08	0.11
Benzene	5.7E-05	7.3E-06	1.03	0.54	4.0E-03	2.10	0.26	9.5E-05	1.3E-04	2.9E-04	1.0E-04	4.6E-05	9.2E-05	2.9E-05	2.4E-02	8.3E-05	9.9E-04	1.6E-05	1.2E-02	4.2E-07	3.97
Biphenyl	----	----	2.1E-03	1.1E-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.2E-03
1,3-Butadiene	----	----	0.43	0.23	----	----	----	4.0E-06	5.3E-05	1.2E-04	4.3E-05	----	----	----	----	3.0E-06	----	----	----	----	0.66
Carbon tetrachloride	----	----	3.2E-02	1.7E-02	----	----	----	----	1.4E-06	3.2E-06	1.2E-06	----	----	----	----	----	----	----	----	----	4.9E-02
Chlorobenzene	----	----	2.4E-02	1.2E-02	----	----	----	----	1.0E-06	2.4E-06	8.4E-07	----	----	----	----	----	----	----	----	----	3.6E-02
Chloroform	----	----	2.5E-02	1.3E-02	----	----	----	----	1.1E-06	2.5E-06	9.0E-07	----	----	----	----	----	----	----	----	----	3.8E-02
Cumene	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	8.8E-05	----	8.8E-05
Dichlorobenzene	3.3E-05	4.2E-06	----	----	----	----	----	----	----	----	----	2.6E-05	----	----	----	----	5.6E-04	----	----	----	6.3E-04
1,1-Dichloroethane	----	----	2.1E-02	1.1E-02	----	----	----	----	9.0E-07	2.1E-06	7.4E-07	----	----	----	----	----	----	----	----	----	3.2E-02
1,2-Dichloroethane	----	----	2.2E-02	1.2E-02	----	----	----	----	9.0E-07	2.1E-06	7.4E-07	----	----	----	----	----	----	----	----	----	3.4E-02
1,2-Dichloropropane	----	----	2.4E-02	1.3E-02	----	----	----	----	1.0E-06	2.4E-06	8.5E-07	----	----	----	----	----	----	----	----	----	3.6E-02
1,3-Dichloropropene	----	----	2.3E-02	1.2E-02	----	----	----	----	1.0E-06	2.3E-06	8.3E-07	----	----	----	----	----	----	----	----	----	3.5E-02
Ethylbenzene	----	----	5.7E-02	3.0E-02	3.6E-02	0.65	2.9E-02	----	2.0E-06	4.6E-06	1.6E-06	----	2.7E-05	8.5E-06	0.22	2.2E-04	----	4.7E-06	1.1E-03	3.8E-06	1.02
Ethylene dibromide	----	----	3.9E-02	2.1E-02	----	----	----	----	1.7E-06	3.9E-06	1.4E-06	----	----	----	----	----	----	----	----	----	5.9E-02
Formaldehyde	2.1E-03	2.6E-04	0.11	5.6E-02	2.9E-02	----	----	1.2E-04	1.6E-03	3.8E-03	1.3E-03	1.6E-03	1.4E-02	4.4E-03	0.18	4.9E-03	3.5E-02	2.4E-03	----	3.1E-06	0.44
N-Hexane	4.9E-02	6.3E-03	0.24	0.12	7.3E-04	0.91	0.46	----	----	----	----	3.9E-02	----	----	4.4E-03	----	0.85	----	3.3E-02	7.6E-08	2.72
Hydrochloric acid	----	0.48	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	0.48
Methanol	----	----	1.31	0.70	----	----	----	----	2.4E-04	5.6E-04	2.0E-04	----	----	----	----	----	----	----	----	----	2.01
Methylene chloride (Dichloromethane)	----	----	7.8E-02	4.1E-02	----	----	----	----	3.3E-06	7.6E-06	2.7E-06	----	----	----	----	----	----	----	----	----	0.12
Phenol	----	----	2.2E-02	1.2E-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.4E-02
Polycyclic Organic Matter (POM)	2.4E-06	3.1E-07	7.1E-02	3.8E-02	3.5E-04	----	0.15	1.7E-05	1.1E-05	2.6E-05	9.2E-06	1.9E-06	1.4E-03	4.4E-04	2.1E-03	1.5E-05	4.1E-05	2.4E-04	----	3.7E-08	0.26
Naphthalene	1.7E-05	2.1E-06	5.1E-02	2.7E-02	----	----	----	----	7.8E-06	1.8E-05	6.3E-06	1.3E-05	4.8E-04	1.5E-04	----	9.0E-06	2.9E-04	8.3E-05	----	----	7.9E-02
Propylene oxide	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.0E-04	----	----	----	----	2.0E-04
Styrene	----	----	2.9E-02	1.5E-02	----	----	----	----	9.5E-07	2.2E-06	7.8E-07	----	----	----	----	----	----	----	----	----	4.4E-02
1,1,1,2-Tetrachloroethane	----	----	3.5E-02	1.9E-02	----	----	----	----	2.0E-06	4.6E-06	1.7E-06	----	----	----	----	----	----	----	----	----	5.4E-02
Toluene	9.3E-05	1.2E-05	0.51	0.27	1.5E-03	2.65	0.38	4.2E-05	4.5E-05	1.0E-04	3.6E-05	7.4E-05	2.7E-03	8.3E-04	8.7E-03	9.0E-04	1.6E-03	4.6E-04	1.1E-02	1.5E-07	3.84
1,1,1-Trichloroethane	----	----	----	----	----	----	----	----	----	----	----	----	1.0E-04	3.2E-05	----	----	----	1.7E-05	----	----	1.5E-04
1,1,2-Trichloroethane	----	----	2.8E-02	1.5E-02	----	----	----	----	1.2E-06	2.8E-06	1.0E-06	----	----	----	----	----	----	----	----	----	4.3E-02
2,2,4-Trimethylpentane	----	----	0.45	0.24	----	----	0.23	----	----	----	----	----	----	----	----	----	----	----	----	----	0.92
Vinyl chloride	----	----	1.3E-02	6.9E-03	----	----	----	----	5.7E-07	1.3E-06	4.7E-07	----	----	----	----	----	----	----	----	----	2.0E-02
Xylenes (isomers and mixture)	----	----	0.14	7.5E-02	7.3E-04	2.29	0.15	2.9E-05	1.6E-05	3.6E-05	1.3E-05	----	4.7E-05	1.5E-05	4.4E-03	4.4E-04	----	8.0E-06	3.6E-03	7.6E-08	2.66
Arsenic Compounds	5.5E-06	3.3E-04	----	----	----	----	----	----	----	----	----	4.4E-06	2.3E-04	7.4E-05	----	----	9.4E-05	4.0E-05	----	----	7.8E-04
Beryllium Compounds	3.3E-07	4.2E-08	----	----	----	----	----	----	----	----	----	2.6E-07	1.8E-04	5.5E-05	----	----	5.6E-06	3.0E-05	----	----	2.7E-04
Cadmium Compounds	3.0E-05	8.2E-04	----	----	----	----	----	----	----	----	----	2.4E-05	1.8E-04	5.5E-05	----	----	5.2E-04	3.0E-05	----	----	1.7E-03
Chromium Compounds	3.8E-05	6.8E-04	----	----	----	----	----	----	----	----	----	3.0E-05	1.8E-04	5.5E-05	----	----	6.6E-04	3.0E-05	----	----	1.7E-03
Cobalt Compounds	2.3E-06	2.9E-07	----	----	----	----	----	----	----	----	----	1.8E-06	----	----	----	----	3.9E-05	----	----	----	4.4E-05
Lead Compounds	1.4E-05	1.6E-02	----	----	----	----	----	----	----	----	----	1.1E-05	5.3E-04	1.7E-04	----	----	2.4E-04	9.1E-05	----	----	1.7E-02
Manganese Compounds	1.0E-05	1.3E-06	----	----	----	----	----	----	----	----	----	8.3E-06	3.5E-04	1.1E-04	----	----	1.8E-04	6.0E-05	----	----	7.2E-04
Mercury Compounds	7.1E-06	4.2E-04	----	----	----	----	----	----	----	----	----	5.7E-06	1.8E-04	5.5E-05	----	----	1.2E-04	3.0E-05	----	----	8.2E-04
Nickel Compounds	5.7E-05	6.0E-04	----	----	----	----	----	----	----	----	----	4.6E-05	1.8E-04	5.5E-05	----	----	9.9E-04	3.0E-05	----	----	1.9E-03
Selenium Compounds	6.6E-07	8.4E-08	----	----	----	----	----	----	----	----	----	5.2E-07	8.8E-04	2.8E-04	----	----	1.1E-05	1.5E-04	----	----	1.3E-03
Total	5.2E-02	0.51	4.93	2.61	7.4E-02	8.60	1.66	3.9E-04	2.6E-03	6.0E-03	2.1E-03	4.1E-02	2.2E-02	6.8E-03	0.44	7.1E-03	0.89	3.7E-03	6.0E-02	7.8E-06	19.91

Table D-2b. HAPs Summary - Unlimited Potential Emissions
Hilcorp Alaska, LLC - Swanson River Field

Hazardous Air Pollutant	Unlimited Potential Emissions (tpy)																				Total
	Significant Units												Insignificant Units								
	1	2	8-12	13-14	24-33	36-37	38-39	40-41	43	44	45	46	Drill Boilers	Drill Heater	Drill Flare	Turbines	FG Heaters	Diesel Heaters	Tanks	Flare	
Acetaldehyde	----	----	6.6E-02	2.8E-02	2.47	----	----	7.8E-05	2.2E-04	5.1E-04	1.8E-04	----	----	----	6.5E-03	2.8E-04	----	----	----	1.1E-07	2.57
Acrolein	----	----	8.8E-02	3.7E-02	0.58	----	----	9.4E-06	2.1E-04	4.8E-04	1.7E-04	----	----	----	1.5E-03	4.4E-05	----	----	----	2.6E-08	0.70
Benzene	5.7E-05	7.3E-06	1.28	0.54	9.14	2.10	0.26	9.5E-05	1.3E-04	2.9E-04	1.0E-04	4.6E-05	9.2E-05	2.9E-05	2.4E-02	8.3E-05	9.9E-04	1.6E-05	1.2E-02	4.2E-07	13.37
Biphenyl	----	----	2.6E-03	1.1E-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3.7E-03
1,3-Butadiene	----	----	0.54	0.23	----	----	----	4.0E-06	5.3E-05	1.2E-04	4.3E-05	----	----	----	----	3.0E-06	----	----	----	----	0.77
Carbon tetrachloride	----	----	4.0E-02	1.7E-02	----	----	----	----	1.4E-06	3.2E-06	1.2E-06	----	----	----	----	----	----	----	----	----	5.7E-02
Chlorobenzene	----	----	2.9E-02	1.2E-02	----	----	----	----	1.0E-06	2.4E-06	8.4E-07	----	----	----	----	----	----	----	----	----	4.2E-02
Chloroform	----	----	3.1E-02	1.3E-02	----	----	----	----	1.1E-06	2.5E-06	9.0E-07	----	----	----	----	----	----	----	----	----	4.4E-02
Cumene	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	8.8E-05	----	8.8E-05
Dichlorobenzene	3.3E-05	4.2E-06	----	----	----	----	----	----	----	----	----	2.6E-05	----	----	----	----	5.6E-04	----	----	----	6.3E-04
1,1-Dichloroethane	----	----	2.6E-02	1.1E-02	----	----	----	----	9.0E-07	2.1E-06	7.4E-07	----	----	----	----	----	----	----	----	----	3.7E-02
1,2-Dichloroethane	----	----	2.8E-02	1.2E-02	----	----	----	----	9.0E-07	2.1E-06	7.4E-07	----	----	----	----	----	----	----	----	----	4.0E-02
1,2-Dichloropropane	----	----	3.0E-02	1.3E-02	----	----	----	----	1.0E-06	2.4E-06	8.5E-07	----	----	----	----	----	----	----	----	----	4.2E-02
1,3-Dichloropropene	----	----	2.9E-02	1.2E-02	----	----	----	----	1.0E-06	2.3E-06	8.3E-07	----	----	----	----	----	----	----	----	----	4.1E-02
Ethylbenzene	----	----	7.1E-02	3.0E-02	83.04	0.65	2.9E-02	----	2.0E-06	4.6E-06	1.6E-06	----	2.7E-05	8.5E-06	0.22	2.2E-04	----	4.7E-06	1.1E-03	3.8E-06	84.03
Ethylene dibromide	----	----	4.9E-02	2.1E-02	----	----	----	----	1.7E-06	3.9E-06	1.4E-06	----	----	----	----	----	----	----	----	----	6.9E-02
Formaldehyde	2.1E-03	2.6E-04	0.13	5.6E-02	67.22	----	----	1.2E-04	1.6E-03	3.8E-03	1.3E-03	1.6E-03	1.4E-02	4.4E-03	0.18	4.9E-03	3.5E-02	2.4E-03	----	3.1E-06	67.66
N-Hexane	4.9E-02	6.3E-03	0.29	0.12	1.67	0.91	0.46	----	----	----	----	3.9E-02	----	----	4.4E-03	----	0.85	----	3.3E-02	7.6E-08	4.44
Hydrochloric acid	----	2.10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.10
Methanol	----	----	1.64	0.70	----	----	----	----	2.4E-04	5.6E-04	2.0E-04	----	----	----	----	----	----	----	----	----	2.34
Methylene chloride (Dichloromethane)	----	----	9.7E-02	4.1E-02	----	----	----	----	3.3E-06	7.6E-06	2.7E-06	----	----	----	----	----	----	----	----	----	0.14
Phenol	----	----	2.8E-02	1.2E-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	4.0E-02
Polycyclic Organic Matter (POM)	2.4E-06	3.1E-07	8.9E-02	3.8E-02	0.81	----	0.15	1.7E-05	1.1E-05	2.6E-05	9.2E-06	1.9E-06	1.4E-03	4.4E-04	2.1E-03	1.5E-05	4.1E-05	2.4E-04	----	3.7E-08	1.08
Naphthalene	1.7E-05	2.1E-06	6.4E-02	2.7E-02	----	----	----	----	7.8E-06	1.8E-05	6.3E-06	1.3E-05	4.8E-04	1.5E-04	----	9.0E-06	2.9E-04	8.3E-05	----	----	9.2E-02
Propylene oxide	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.0E-04	----	----	----	----	2.0E-04
Styrene	----	----	3.6E-02	1.5E-02	----	----	----	----	9.5E-07	2.2E-06	7.8E-07	----	----	----	----	----	----	----	----	----	5.2E-02
1,1,1,2-Tetrachloroethane	----	----	4.4E-02	1.9E-02	----	----	----	----	2.0E-06	4.6E-06	1.7E-06	----	----	----	----	----	----	----	----	----	6.2E-02
Toluene	9.3E-05	1.2E-05	0.64	0.27	3.34	2.65	0.38	4.2E-05	4.5E-05	1.0E-04	3.6E-05	7.4E-05	2.7E-03	8.3E-04	8.7E-03	9.0E-04	1.6E-03	4.6E-04	1.1E-02	1.5E-07	7.30
1,1,1-Trichloroethane	----	----	----	----	----	----	----	----	----	----	----	----	1.0E-04	3.2E-05	----	----	----	1.7E-05	----	----	1.5E-04
1,1,2-Trichloroethane	----	----	3.5E-02	1.5E-02	----	----	----	----	1.2E-06	2.8E-06	1.0E-06	----	----	----	----	----	----	----	----	----	5.0E-02
2,2,4-Trimethylpentane	----	----	0.56	0.24	----	----	0.23	----	----	----	----	----	----	----	----	----	----	----	----	----	1.03
Vinyl chloride	----	----	1.6E-02	6.9E-03	----	----	----	----	5.7E-07	1.3E-06	4.7E-07	----	----	----	----	----	----	----	----	----	2.3E-02
Xylenes (isomers and mixture)	----	----	0.18	7.5E-02	1.67	2.29	0.15	2.9E-05	1.6E-05	3.6E-05	1.3E-05	----	4.7E-05	1.5E-05	4.4E-03	4.4E-04	----	8.0E-06	3.6E-03	7.6E-08	4.36
Arsenic Compounds	5.5E-06	1.4E-03	----	----	----	----	----	----	----	----	----	4.4E-06	2.3E-04	7.4E-05	----	----	9.4E-05	4.0E-05	----	----	1.9E-03
Beryllium Compounds	3.3E-07	4.2E-08	----	----	----	----	----	----	----	----	----	2.6E-07	1.8E-04	5.5E-05	----	----	5.6E-06	3.0E-05	----	----	2.7E-04
Cadmium Compounds	3.0E-05	3.6E-03	----	----	----	----	----	----	----	----	----	2.4E-05	1.8E-04	5.5E-05	----	----	5.2E-04	3.0E-05	----	----	4.4E-03
Chromium Compounds	3.8E-05	3.0E-03	----	----	----	----	----	----	----	----	----	3.0E-05	1.8E-04	5.5E-05	----	----	6.6E-04	3.0E-05	----	----	3.9E-03
Cobalt Compounds	2.3E-06	2.9E-07	----	----	----	----	----	----	----	----	----	1.8E-06	----	----	----	----	3.9E-05	----	----	----	4.4E-05
Lead Compounds	1.4E-05	7.0E-02	----	----	----	----	----	----	----	----	----	1.1E-05	5.3E-04	1.7E-04	----	----	2.4E-04	9.1E-05	----	----	7.1E-02
Manganese Compounds	1.0E-05	1.3E-06	----	----	----	----	----	----	----	----	----	8.3E-06	3.5E-04	1.1E-04	----	----	1.8E-04	6.0E-05	----	----	7.2E-04
Mercury Compounds	7.1E-06	1.8E-03	----	----	----	----	----	----	----	----	----	5.7E-06	1.8E-04	5.5E-05	----	----	1.2E-04	3.0E-05	----	----	2.2E-03
Nickel Compounds	5.7E-05	2.6E-03	----	----	----	----	----	----	----	----	----	4.6E-05	1.8E-04	5.5E-05	----	----	9.9E-04	3.0E-05	----	----	3.9E-03
Selenium Compounds	6.6E-07	8.4E-08	----	----	----	----	----	----	----	----	----	5.2E-07	8.8E-04	2.8E-04	----	----	1.1E-05	1.5E-04	----	----	1.3E-03
Total	5.2E-02	2.19	6.17	2.61	169.93	8.60	1.66	3.9E-04	2.6E-03	6.0E-03	2.1E-03	4.1E-02	2.2E-02	6.8E-03	0.44	7.1E-03	0.89	3.7E-03	6.0E-02	7.8E-06	192.68

Table D-2c. HAPs Summary - Estimated Actual Emissions
Hilcorp Alaska, LLC - Swanson River Field

Hazardous Air Pollutant	Estimated Actual Emissions (tpy)																				Total
	Significant Units												Insignificant Units								
	1	2	8-12	13-14	24-33	36-37	38-39	40-41	43	44	45	46	Drill Boilers	Drill Heater	Drill Flare	Turbines	FG Heaters	Diesel Heaters	Tanks	Flare	
Acetaldehyde	----	----	3.3E-02	1.2E-02	6.5E-04	----	----	3.6E-06	1.1E-05	0	0	----	----	----	0	2.8E-04	----	----	----	1.1E-07	4.6E-02
Acrolein	----	----	4.4E-02	1.6E-02	1.5E-04	----	----	4.3E-07	1.0E-05	0	0	----	----	----	0	4.4E-05	----	----	----	2.6E-08	6.0E-02
Benzene	7.0E-07	8.6E-08	0.64	0.23	2.4E-03	1.05	4.5E-02	4.3E-06	6.2E-06	0	0	2.3E-05	1.5E-05	4.8E-06	0	8.3E-05	9.9E-04	1.6E-05	1.2E-02	4.2E-07	1.98
Biphenyl	----	----	1.3E-03	4.7E-04	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1.8E-03
1,3-Butadiene	----	----	0.27	9.8E-02	----	----	----	1.8E-07	2.6E-06	0	0	----	----	----	----	3.0E-06	----	----	----	----	0.37
Carbon tetrachloride	----	----	2.0E-02	7.2E-03	----	----	----	----	7.0E-08	0	0	----	----	----	----	----	----	----	----	----	2.7E-02
Chlorobenzene	----	----	1.5E-02	5.3E-03	----	----	----	----	5.1E-08	0	0	----	----	----	----	----	----	----	----	----	2.0E-02
Chloroform	----	----	1.6E-02	5.6E-03	----	----	----	----	5.4E-08	0	0	----	----	----	----	----	----	----	----	----	2.1E-02
Cumene	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	8.8E-05	----	8.8E-05
Dichlorobenzene	4.0E-07	4.9E-08	----	----	----	----	----	----	----	----	----	1.3E-05	----	----	----	----	5.6E-04	----	----	----	5.8E-04
1,1-Dichloroethane	----	----	1.3E-02	4.7E-03	----	----	----	----	4.5E-08	0	0	----	----	----	----	----	----	----	----	----	1.8E-02
1,2-Dichloroethane	----	----	1.4E-02	5.0E-03	----	----	----	----	4.5E-08	0	0	----	----	----	----	----	----	----	----	----	1.9E-02
1,2-Dichloropropane	----	----	1.5E-02	5.3E-03	----	----	----	----	5.1E-08	0	0	----	----	----	----	----	----	----	----	----	2.0E-02
1,3-Dichloropropene	----	----	1.5E-02	5.2E-03	----	----	----	----	5.0E-08	0	0	----	----	----	----	----	----	----	----	----	2.0E-02
Ethylbenzene	----	----	3.6E-02	1.3E-02	2.2E-02	0.32	5.0E-03	----	9.8E-08	0	0	----	4.5E-06	1.4E-06	0	2.2E-04	----	4.7E-06	1.1E-03	3.8E-06	0.40
Ethylene dibromide	----	----	2.4E-02	8.7E-03	----	----	----	----	8.4E-08	0	0	----	----	----	----	----	----	----	----	----	3.3E-02
Formaldehyde	2.5E-05	3.1E-06	6.6E-02	2.4E-02	1.8E-02	----	----	5.5E-06	8.1E-05	0	0	8.2E-04	2.4E-03	7.4E-04	0	4.9E-03	3.5E-02	2.4E-03	----	3.1E-06	0.15
N-Hexane	6.0E-04	7.4E-05	0.15	5.3E-02	4.4E-04	0.46	8.0E-02	----	----	----	----	2.0E-02	----	----	0	----	8.5E-01	----	3.3E-02	7.6E-08	1.64
Hydrochloric acid	----	2.4E-02	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.4E-02
Methanol	----	----	0.82	0.30	----	----	----	----	1.2E-05	0	0	----	----	----	----	----	----	----	----	----	1.12
Methylene chloride (Dichloromethane)	----	----	4.9E-02	1.8E-02	----	----	----	----	1.6E-07	0	0	----	----	----	----	----	----	----	----	----	6.6E-02
Phenol	----	----	1.4E-02	5.0E-03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1.9E-02
Polycyclic Organic Matter (POM)	2.9E-08	3.6E-09	4.4E-02	1.6E-02	2.1E-04	----	2.5E-02	7.8E-07	5.6E-07	0	0	9.6E-07	2.4E-04	7.4E-05	0	1.5E-05	4.1E-05	2.4E-04	----	3.7E-08	8.6E-02
Naphthalene	2.0E-07	2.5E-08	3.2E-02	1.1E-02	----	----	----	----	3.8E-07	0	0	6.6E-06	8.1E-05	2.5E-05	----	9.0E-06	2.9E-04	8.3E-05	----	----	4.4E-02
Propylene oxide	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2.0E-04	----	----	----	----	2.0E-04
Styrene	----	----	1.8E-02	6.5E-03	----	----	----	----	4.7E-08	0	0	----	----	----	----	----	----	----	----	----	2.5E-02
1,1,1,2-Tetrachloroethane	----	----	2.2E-02	7.9E-03	----	----	----	----	1.0E-07	0	0	----	----	----	----	----	----	----	----	----	3.0E-02
Toluene	1.1E-06	1.4E-07	0.32	0.11	8.8E-04	1.33	6.5E-02	1.9E-06	2.2E-06	0	0	3.7E-05	4.4E-04	1.4E-04	0	9.0E-04	1.6E-03	4.6E-04	1.1E-02	1.5E-07	1.84
1,1,1-Trichloroethane	----	----	----	----	----	----	----	----	----	----	----	----	1.7E-05	5.3E-06	----	----	----	1.7E-05	----	----	4.0E-05
1,1,2-Trichloroethane	----	----	1.7E-02	6.3E-03	----	----	----	----	6.0E-08	0	0	----	----	----	----	----	----	----	----	----	2.4E-02
2,2,4-Trimethylpentane	----	----	0.28	0.10	----	----	4.0E-02	----	----	----	----	----	----	----	----	----	----	----	----	----	0.42
Vinyl chloride	----	----	8.2E-03	2.9E-03	----	----	----	----	2.8E-08	0	0	----	----	----	----	----	----	----	----	----	1.1E-02
Xylenes (isomers and mixture)	----	----	8.9E-02	3.2E-02	4.4E-04	1.14	2.5E-02	1.3E-06	7.7E-07	0	0	----	7.8E-06	2.4E-06	0	4.4E-04	----	8.0E-06	3.6E-03	7.6E-08	1.30
Arsenic Compounds	6.7E-08	1.6E-05	----	----	----	----	----	----	----	----	----	2.2E-06	3.9E-05	1.2E-05	----	----	9.4E-05	4.0E-05	----	----	2.0E-04
Beryllium Compounds	4.0E-09	4.9E-10	----	----	----	----	----	----	----	----	----	1.3E-07	2.9E-05	9.2E-06	----	----	5.6E-06	3.0E-05	----	----	7.5E-05
Cadmium Compounds	3.7E-07	4.1E-05	----	----	----	----	----	----	----	----	----	1.2E-05	2.9E-05	9.2E-06	----	----	5.2E-04	3.0E-05	----	----	6.4E-04
Chromium Compounds	4.7E-07	3.4E-05	----	----	----	----	----	----	----	----	----	1.5E-05	2.9E-05	9.2E-06	----	----	6.6E-04	3.0E-05	----	----	7.8E-04
Cobalt Compounds	2.8E-08	3.5E-09	----	----	----	----	----	----	----	----	----	9.1E-07	----	----	----	----	3.9E-05	----	----	----	4.0E-05
Lead Compounds	1.7E-07	8.0E-04	----	----	----	----	----	----	----	----	----	5.4E-06	8.8E-05	2.8E-05	----	----	2.4E-04	9.1E-05	----	----	1.2E-03
Manganese Compounds	1.3E-07	1.6E-08	----	----	----	----	----	----	----	----	----	4.1E-06	5.9E-05	1.8E-05	----	----	1.8E-04	6.0E-05	----	----	3.2E-04
Mercury Compounds	8.7E-08	2.1E-05	----	----	----	----	----	----	----	----	----	2.8E-06	2.9E-05	9.2E-06	----	----	1.2E-04	3.0E-05	----	----	2.2E-04
Nickel Compounds	7.0E-07	3.0E-05	----	----	----	----	----	----	----	----	----	2.3E-05	2.9E-05	9.2E-06	----	----	9.9E-04	3.0E-05	----	----	1.1E-03
Selenium Compounds	8.0E-09	9.9E-10	----	----	----	----	----	----	----	----	----	2.6E-07	1.5E-04	4.6E-05	----	----	1.1E-05	1.5E-04	----	----	3.6E-04
Total	6.3E-04	2.5E-02	3.09	1.11	4.5E-02	4.3	0.28	1.8E-05	1.3E-04	0	0	2.1E-02	3.6E-03	1.1E-03	0	7.1E-03	8.9E-01	3.7E-03	6.0E-02	7.8E-06	9.84

Table D-3a. Significant Emission Unit Inventory
Hilcorp Alaska, LLC - Swanson River Field

EU ID	Emissions Unit Name	Emissions Unit Description	Fuel	Rating/Size	Limited Potential Operation ¹	Unlimited Potential Operation ²	Estimated Actual Operation ³
1	Plant Boiler F-201	Cleaver Brooks CB760-150	FG	6.275 MMBtu/hr	8,760 hr/yr	8,760 hr/yr	107 hr/yr
2	Refuse Incinerator	Incinomite J83 DS Burner	Waste	150 lb/hr	300,000 lb/yr ⁴	1,314,000 lb/yr	15,021 lb/yr
			FG	0.8 MMBtu/hr	8,760 hr/yr	8,760 hr/yr	103 hr/yr
8	Compressor Drive K-11	Clark TLA-10 Engine	FG	3,777 hp	8,760 hr/yr	8,760 hr/yr	3,634 hr/yr
9	Compressor Drive K-12	Clark TLA-10 Engine	FG	3,777 hp	8,760 hr/yr	8,760 hr/yr	5,900 hr/yr
10	Compressor Drive K-13	Clark TLA-10 Engine	FG	3,777 hp	8,760 hr/yr	8,760 hr/yr	6,268 hr/yr
11	Compressor Drive K-14	Clark TLA-10 Engine	FG	3,777 hp	8,760 hr/yr	8,760 hr/yr	5,053 hr/yr
12	Compressor Drive K-15	Clark TLA-10 Engine	FG	3,777 hp	17,520 hr/yr ⁵	8,760 hr/yr	1,085 hr/yr
13	Compressor Drive K-17	Clark TLAD-10 Engine	FG	4,000 hp		8,760 hr/yr	4,553 hr/yr
14	Compressor Drive K-18	Clark TLAD-10 Engine	FG	4,000 hp		8,760 hr/yr	2,897 hr/yr
24/25	Flare (150#)/Main Flare (900#)	Flare (150#)/Main Flare (900#)	FG	16.041 MMBtu/hr	50.0 MMscf/yr ⁶	8,760 hr/yr	30.4 MMscf/yr
27	Flare 1-27	Flare	FG	0.345 MMscf/hr		8,760 hr/yr	
28	Flare 1-33	Flare	FG	0.605 MMscf/hr		8,760 hr/yr	
29	Flare 1-4	Flare	FG	3.744 MMscf/hr		8,760 hr/yr	
30	Flare 1-9	Flare	FG	3.903 MMscf/hr		8,760 hr/yr	
31	Flare 2-15	Flare	FG	0.126 MMscf/hr		8,760 hr/yr	
32	Flare 3-4	Flare	FG	2.305 MMscf/hr		8,760 hr/yr	
33	Flare 3-9	Flare	FG	2.085 MMscf/hr		8,760 hr/yr	
36	TEG Regenerator Vent	CIGGS1 Dehydration Unit	N/A	105 MMscfd	8,760 hr/yr	8,760 hr/yr	8,760 hr/yr
37	TEG Regenerator Vent	CIGGS2 Dehydration Unit	N/A	105 MMscfd	8,760 hr/yr	8,760 hr/yr	
38	Gasoline Dispensing Facility	Located at the Shop	N/A	N/A	100,000 gal/month	100,000 gal/month	34,297 gal/yr
39	Gasoline Dispensing Facility	Located at the Pipe and Supply Yard	N/A	N/A	100,000 gal/month	100,000 gal/month	0 gal/yr
40	Generator	Generac Guardian RV Engine	Gasoline	19 kW	500 hr/yr ⁷	500 hr/yr ⁸	23 hr/yr
41	Generator	Generac Guardian RV Engine	Gasoline	19 kW	500 hr/yr ⁷	500 hr/yr ⁸	23 hr/yr
43	Emergency Generator	Cummins C20N6 Engine	FG	40 hp	500 hr/yr ⁸	500 hr/yr ⁸	25 hr/yr
44	Emergency Generator	Generac RG036 Engine	FG	36 kW-e	500 hr/yr ⁸	500 hr/yr ⁸	0 hr/yr
45	Emergency Generator	Briggs & Stratton PP20 Engine	FG	20 kW-e	500 hr/yr ⁸	500 hr/yr ⁸	0 hr/yr
46	Sand Pit Burner	Heater	FG	5 MMBtu/hr	8,760 hr/yr	8,760 hr/yr	4,380 hr/yr
<i>Drill Rig Units</i>							
N/A	Drilling Engine ⁹	Caterpillar D-398	Diesel	800 kW	N/A	N/A	N/A
N/A	Drilling Engine ⁹	Caterpillar D-398	Diesel	800 kW	N/A	N/A	N/A
N/A	Drilling Engine ⁹	Caterpillar D-398	Diesel	800 kW	N/A	N/A	N/A
N/A	Drilling Engine ⁹	Caterpillar D-398	Diesel	800 kW	N/A	N/A	N/A
N/A	Drilling Engine ⁹	Caterpillar 3306	Diesel	120 kW	N/A	N/A	N/A
N/A	Drilling Boiler	Williams and Davis Drilling Boiler #1	Diesel	6.69 MMBtu/hr	8,760 hr/yr	8,760 hr/yr	1,464 hr/yr
N/A	Drilling Boiler	Williams and Davis Drilling Boiler #2	Diesel	6.69 MMBtu/hr	8,760 hr/yr	8,760 hr/yr	1,464 hr/yr
N/A	Drilling Heater	Air Heater #1	Diesel	4.2 MMBtu/hr	8,760 hr/yr	8,760 hr/yr	1,464 hr/yr
N/A	Drilling Test Flare	Test Flare	FG	300 MMscf/yr	300 MMscf/yr	300 MMscf/yr	0 MMscf/yr

**Table D-3b. Insignificant Emission Unit Inventory
Hilcorp Alaska, LLC - Swanson River Field**

EU ID	Emissions Unit Name	Emissions Unit Description	Fuel	Rating/Size	Unlimited Potential Operation ²
42a	Boiler	Superior Boiler	FG	2.7 MMBtu/hr	8,760 hr/yr
N/A	Microturbines (x2)	Capstone Microturbines (65 kW, each)	FG	130 kW, total	8,760 hr/yr
N/A	Oil Heater	Heater Model S061359	FG	4 MMBtu/hr	8,760 hr/yr
N/A	Space Heater	National US Radiator Boiler	FG	0.3 MMBtu/hr	8,760 hr/yr
N/A	Water Heater	Day & Night 100JSB-7	FG	0.22 MMBtu/hr	8,760 hr/yr
N/A	Space Heaters (x2)	Modine (0.01 MMBtu/hr, each)	FG	0.02 MMBtu/hr, total	8,760 hr/yr
N/A	Space Heater	Modine	FG	0.081 MMBtu/hr	8,760 hr/yr
N/A	Space Heater	Modine	FG	0.231 MMBtu/hr	8,760 hr/yr
N/A	Space Heaters (x4)	Modine (0.075 MMBtu/hr, each)	FG	0.3 MMBtu/hr, total	8,760 hr/yr
N/A	Space Heaters (x2)	Modine (0.16 MMBtu/hr, each)	FG	0.32 MMBtu/hr, total	8,760 hr/yr
N/A	Space Heater	Modine	FG	0.328 MMBtu/hr	8,760 hr/yr
N/A	Space Heaters (x2)	Modine (0.2 MMBtu/hr, each)	FG	0.4 MMBtu/hr, total	8,760 hr/yr
N/A	Space Heaters (x2)	Reznor (0.4 MMBtu/hr, each)	FG	0.8 MMBtu/hr, total	8,760 hr/yr
N/A	Space Heater	Reznor	FG	0.312 MMBtu/hr	8,760 hr/yr
N/A	Space Heater	Janitrol UCS 175-55	FG	0.2 MMBtu/hr	8,760 hr/yr
N/A	Space Heater	Modine	FG	0.3 MMBtu/hr	8,760 hr/yr
N/A	Reboilers (x2)	Glycol Reboilers (0.5 MMBtu/hr, each)	FG	1 MMBtu/hr, total	8,760 hr/yr
N/A	Heater	Struther Wells Therminol	FG	1.5 MMBtu/hr	8,760 hr/yr
N/A	Space Heater	Ready R-100	Diesel	0.1 MMBtu/hr	8,760 hr/yr
N/A	Portable Heater	ICE OHV350-II	Diesel	0.3 MMBtu/hr	8,760 hr/yr
N/A	Pressure Washer	Pressure Washer with Heater	Diesel	0.4 MMBtu/hr	8,760 hr/yr
N/A	Portable Heaters (x3)	Portable Indirect Heaters (0.5 MMBtu/hr, each)	Diesel	1.5 MMBtu/hr, total	8,760 hr/yr
N/A	Oil Heater	TS2-15 Oil Heater	FG	4 MMBtu/hr	8,760 hr/yr
N/A	Oil Heater	TS1-27 Oil Heater	FG	4 MMBtu/hr	8,760 hr/yr
N/A	Oil Heaters (x2)	TS1-33 Oil Heaters (<4 MMBtu/hr, each)	FG	8 MMBtu/hr, total	8,760 hr/yr
N/A	Oil Heater	TS1-4 Oil Heater	FG	4 MMBtu/hr	8,760 hr/yr
N/A	Oil Heater	TS1-9 Oil Heater	FG	4 MMBtu/hr	8,760 hr/yr
N/A	Oil Heater	TS3-4 Oil Heater	FG	4 MMBtu/hr	8,760 hr/yr
N/A	Oil Heater	TS3-9 Oil Heater	FG	4 MMBtu/hr	8,760 hr/yr
N/A	Line Heaters (x61)	Line Heaters (<3 MMBtu/hr, each)	FG	61.9 MMBtu/hr, total	8,760 hr/yr
N/A	Line Heater	Bridge ANSI Choke Heater	FG	1 MMBtu/hr	8,760 hr/yr
N/A	Crude Oil Tank 22	Tank 22	N/A	327,138 gal	8,760 hr/yr
N/A	Produced Water Tanks (x2)	TS 2-15 & 1-27 Tanks (16,800 gal, each)	N/A	33,600 gal, total	8,760 hr/yr
N/A	Produced Water Tank	TS 1-4 Produced Water Tank	N/A	357 gal	8,760 hr/yr
N/A	Jet A/Diesel Tanks (x3)	Jet A/Diesel Tanks (6,000 gal, each)	N/A	18,000 gal, total	8,760 hr/yr
N/A	Jet A/Diesel Tank	Jet A/Diesel Tank	N/A	6,044 gal	8,760 hr/yr
N/A	Jet A/Diesel Tanks (x2)	Jet A/Diesel Tanks (2,000 gal, each)	N/A	4,000 gal, total	8,760 hr/yr
N/A	Diesel Fuel Tank	Diesel Fuel Tank	N/A	2,169 gal	8,760 hr/yr
N/A	Kerosene (Jet A) Tank	Kerosene (Jet A) Tank	N/A	500 gal	8,760 hr/yr
N/A	Gasoline Tank	Gasoline Tank	N/A	2,169 gal	8,760 hr/yr
N/A	Gasoline Tank	Gasoline Tank	N/A	2,000 gal	8,760 hr/yr
N/A	Gasoline Tank	Gasoline Tank	N/A	90 gal	8,760 hr/yr
N/A	Gasoline Tank	Gasoline Tank	N/A	75 gal	8,760 hr/yr
N/A	Xylene Tank	Primary Xylene Storage Tank	N/A	10,000 gal	8,760 hr/yr
N/A	Process Flare	Process Flare	Propane	0.0363 MMBtu/day	365 day/yr

Notes:

¹ Limited operation is based on full-time operation, or permit operating limits, where applicable.

² Maximum annual operation for all units is based on full-time annual operation and is used to calculate unlimited potential emissions.

³ Estimated actual operation is based on calendar year 2023 actual operation.

⁴ EU ID 2 incinerator waste is limited to 300,000 pounds in any consecutive 12-month period per Condition 9 of Permit No. AQ0059TVP01, Revision 1.

⁵ EU IDs 12, 13, and 14 are limited the cumulative hours of operation to 17,520 hours in any consecutive 12-month period, per Condition 8 of Permit No. AQ0059TVP01, Revision 1.

⁶ The maximum combined flare rating of 50 MMscf/yr is used for calculations as a conservative annual estimate.

⁷ EU IDs 40 and 41 are limited to 500 hours each in any consecutive 12-month period, per Condition 12 of Permit No. AQ0059TVP02, Revision 3.

⁸ According to a memorandum from John S. Seitz of the EPA, 500 hours of operation is an appropriate default assumption for estimating the number of hours an emergency generator could be expected to operate per year.

⁹ Nonroad engine emissions do not count toward potential to emit per 18 AAC 50.100.

**Table D-4a. Significant Emission Unit Inventory - NO_x Emissions
Hilcorp Alaska, LLC - Swanson River Field**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Limited Potential Emissions	Unlimited Potential Emissions	Estimated Actual Emissions
1	Plant Boiler F-201	FG	6.275 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	2.73 tpy	2.73 tpy	3.3E-02 tpy
2	Refuse Incinerator	Waste	150 lb/hr	AP-42 Table 2.1-12	2 lb/ton	0.15 tpy	0.66 tpy	7.5E-03 tpy
		FG	0.8 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	0.35 tpy	0.35 tpy	4.1E-03 tpy
8	Compressor Drive K-11	FG	3,777 hp	AP-42 Table 3.2-1	3.17 lb/MMBtu	419.54 tpy	419.54 tpy	174.04 tpy
9	Compressor Drive K-12	FG	3,777 hp	AP-42 Table 3.2-1	3.17 lb/MMBtu	419.54 tpy	419.54 tpy	282.56 tpy
10	Compressor Drive K-13	FG	3,777 hp	AP-42 Table 3.2-1	3.17 lb/MMBtu	419.54 tpy	419.54 tpy	300.17 tpy
11	Compressor Drive K-14	FG	3,777 hp	AP-42 Table 3.2-1	3.17 lb/MMBtu	419.54 tpy	419.54 tpy	241.99 tpy
12	Compressor Drive K-15	FG	3,777 hp	AP-42 Table 3.2-1	3.17 lb/MMBtu	888.61 tpy	419.54 tpy	51.96 tpy
13	Compressor Drive K-17	FG	4,000 hp	AP-42 Table 3.2-1	3.17 lb/MMBtu		444.31 tpy	230.93 tpy
14	Compressor Drive K-18	FG	4,000 hp	AP-42 Table 3.2-1	3.17 lb/MMBtu		444.31 tpy	146.94 tpy
24/25	Flare (150#)/Main Flare (900#)	FG	16.041 MMBtu/hr	AP-42 Table 13.5-1	0.068 lb/MMBtu		1.71 tpy	4.78 tpy
27	Flare 1-27	FG	0.345 MMscf/hr	AP-42 Table 13.5-1	0.068 lb/MMBtu	103.31 tpy		
28	Flare 1-33	FG	0.605 MMscf/hr	AP-42 Table 13.5-1	0.068 lb/MMBtu	181.17 tpy		
29	Flare 1-4	FG	3.744 MMscf/hr	AP-42 Table 13.5-1	0.068 lb/MMBtu	1,121.13 tpy		
30	Flare 1-9	FG	3.903 MMscf/hr	AP-42 Table 13.5-1	0.068 lb/MMBtu	1,168.75 tpy		
31	Flare 2-15	FG	0.126 MMscf/hr	AP-42 Table 13.5-1	0.068 lb/MMBtu	37.73 tpy		
32	Flare 3-4	FG	2.305 MMscf/hr	AP-42 Table 13.5-1	0.068 lb/MMBtu	690.23 tpy		
33	Flare 3-9	FG	2.085 MMscf/hr	AP-42 Table 13.5-1	0.068 lb/MMBtu	624.35 tpy		
36	TEG Regenerator Vent	N/A	105 MMscfd	N/A	N/A	0 tpy	0 tpy	0 tpy
37	TEG Regenerator Vent	N/A	105 MMscfd	N/A	N/A	0 tpy	0 tpy	0 tpy
38	Gasoline Dispensing Facility	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
39	Gasoline Dispensing Facility	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
40	Generator	Gasoline	19 kW	AP-42 Table 3.3-1	0.011 lb/hp-hr	7.0E-02 tpy	7.0E-02 tpy	3.2E-03 tpy
41	Generator	Gasoline	19 kW	AP-42 Table 3.3-1	0.011 lb/hp-hr	7.0E-02 tpy	7.0E-02 tpy	3.2E-03 tpy
43	Emergency Generator	FG	40 hp	AP-42 Table 3.2-3	2.27 lb/MMBtu	0.18 tpy	0.18 tpy	9.0E-03 tpy
44	Emergency Generator	FG	36 kW-e	NSPS Subpart JJJJ	10 g/hp-hr	0.51 tpy	0.51 tpy	0 tpy
45	Emergency Generator	FG	20 kW-e	NSPS Subpart JJJJ	10 g/hp-hr	0.18 tpy	0.18 tpy	0 tpy
46	Sand Pit Burner	FG	5 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	2.18 tpy	2.18 tpy	1.09 tpy
<i>Drill Rig Units</i>								
N/A	Drilling Boiler	Diesel	6.69 MMBtu/hr	AP-42 Table 1.3-1	20 lb/kgal	4.28 tpy	4.28 tpy	0.71 tpy
N/A	Drilling Boiler	Diesel	6.69 MMBtu/hr	AP-42 Table 1.3-1	20 lb/kgal	4.28 tpy	4.28 tpy	0.71 tpy
N/A	Drilling Heater	Diesel	4.2 MMBtu/hr	AP-42 Table 1.3-1	20 lb/kgal	2.69 tpy	2.69 tpy	0.45 tpy
N/A	Drilling Test Flare	FG	300 MMscf/yr	AP-42 Table 13.5-1	0.068 lb/MMBtu	10.26 tpy	10.26 tpy	0 tpy
Total						2,596.39 tpy	6,946.16 tpy	1,432.65 tpy

**Table D-4b. Insignificant Emission Unit Inventory - NO_x Emissions
Hilcorp Alaska, LLC - Swanson River Field**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Unlimited Potential Emissions
42a	Boiler	FG	2.7 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	1.18 tpy
N/A	Microturbines (x2)	FG	130 kW, total	Vendor Data	0.4 lb/MWh	0.23 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	1.74 tpy
N/A	Space Heater	FG	0.3 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	0.13 tpy
N/A	Water Heater	FG	0.22 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	9.6E-02 tpy
N/A	Space Heaters (x2)	FG	0.02 MMBtu/hr, total	AP-42 Table 1.4-1	100 lb/MMscf	8.7E-03 tpy
N/A	Space Heater	FG	0.081 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	3.5E-02 tpy
N/A	Space Heater	FG	0.231 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	0.10 tpy
N/A	Space Heaters (x4)	FG	0.3 MMBtu/hr, total	AP-42 Table 1.4-1	100 lb/MMscf	0.13 tpy
N/A	Space Heaters (x2)	FG	0.32 MMBtu/hr, total	AP-42 Table 1.4-1	100 lb/MMscf	0.14 tpy
N/A	Space Heater	FG	0.328 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	0.14 tpy
N/A	Space Heaters (x2)	FG	0.4 MMBtu/hr, total	AP-42 Table 1.4-1	100 lb/MMscf	0.17 tpy
N/A	Space Heaters (x2)	FG	0.8 MMBtu/hr, total	AP-42 Table 1.4-1	100 lb/MMscf	0.35 tpy
N/A	Space Heater	FG	0.312 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	0.14 tpy
N/A	Space Heater	FG	0.2 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	8.7E-02 tpy
N/A	Space Heater	FG	0.3 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	0.13 tpy
N/A	Reboilers (x2)	FG	1 MMBtu/hr, total	AP-42 Table 1.4-1	100 lb/MMscf	0.44 tpy
N/A	Heater	FG	1.5 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	0.65 tpy
N/A	Space Heater	Diesel	0.1 MMBtu/hr	AP-42 Table 1.3-1	20 lb/kgal	6.4E-02 tpy
N/A	Portable Heater	Diesel	0.3 MMBtu/hr	AP-42 Table 1.3-1	20 lb/kgal	0.19 tpy
N/A	Pressure Washer	Diesel	0.4 MMBtu/hr	AP-42 Table 1.3-1	20 lb/kgal	0.26 tpy
N/A	Portable Heaters (x3)	Diesel	1.5 MMBtu/hr, total	AP-42 Table 1.3-1	20 lb/kgal	0.96 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	1.74 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	1.74 tpy
N/A	Oil Heaters (x2)	FG	8 MMBtu/hr, total	AP-42 Table 1.4-1	100 lb/MMscf	3.49 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	1.74 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	1.74 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	1.74 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	1.74 tpy
N/A	Line Heaters (x61)	FG	61.9 MMBtu/hr, total	AP-42 Table 1.4-1	100 lb/MMscf	26.97 tpy
N/A	Line Heater	FG	1 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	0.44 tpy
N/A	Crude Oil Tank 22	N/A	327,138 gal	N/A	N/A	0 tpy
N/A	Produced Water Tanks (x2)	N/A	33,600 gal, total	N/A	N/A	0 tpy
N/A	Produced Water Tank	N/A	357 gal	N/A	N/A	0 tpy
N/A	Jet A/Diesel Tanks (x3)	N/A	18,000 gal, total	N/A	N/A	0 tpy
N/A	Jet A/Diesel Tank	N/A	6,044 gal	N/A	N/A	0 tpy
N/A	Jet A/Diesel Tanks (x2)	N/A	4,000 gal, total	N/A	N/A	0 tpy
N/A	Diesel Fuel Tank	N/A	2,169 gal	N/A	N/A	0 tpy
N/A	Kerosene (Jet A) Tank	N/A	500 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	2,169 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	2,000 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	90 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	75 gal	N/A	N/A	0 tpy
N/A	Xylene Tank	N/A	10,000 gal	N/A	N/A	0 tpy
N/A	Process Flare	Propane	0.0363 MMBtu/day	AP-42 Table 13.5-1	0.068 lb/MMBtu	4.5E-04 tpy
Total						48.71 tpy

Conversions:

Diesel Fuel Heat Content:	137,000 Btu/gal	EU ID 44 Heat Rate:	730 scf/hr
Liquid Fuel Density:	7 lb/gal	EU ID 45 Heat Rate:	260 scf/hr
Gasoline Heat Content:	125,000 Btu/gal	Microturbine Heat Rate:	12,200 Btu/kW-hr
Fuel Gas Heat Content:	1,005 Btu/scf	Propane Heat Value:	90,500 Btu/gal
Gas-Fired Engine Heat Rate:	8,000 Btu/hp-hr	Propane Density:	4.24 lb/gal

**Table D-5a. Significant Emission Unit Inventory - CO Emissions
Hilcorp Alaska, LLC - Swanson River Field**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Limited Potential Emissions	Unlimited Potential Emissions	Estimated Actual Emissions
1	Plant Boiler F-201	FG	6.275 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	2.30 tpy	2.30 tpy	2.8E-02 tpy
2	Refuse Incinerator	Waste	150 lb/hr	AP-42 Table 2.1-12	20 lb/ton	1.50 tpy	6.6 tpy	7.5E-02 tpy
		FG	0.8 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	0.29 tpy	0.3 tpy	3.5E-03 tpy
8	Compressor Drive K-11	FG	3,777 hp	AP-42 Table 3.2-1	0.386 lb/MMBtu	51.09 tpy	51.09 tpy	21.19 tpy
9	Compressor Drive K-12	FG	3,777 hp	AP-42 Table 3.2-1	0.386 lb/MMBtu	51.09 tpy	51.09 tpy	34.41 tpy
10	Compressor Drive K-13	FG	3,777 hp	AP-42 Table 3.2-1	0.386 lb/MMBtu	51.09 tpy	51.09 tpy	36.55 tpy
11	Compressor Drive K-14	FG	3,777 hp	AP-42 Table 3.2-1	0.386 lb/MMBtu	51.09 tpy	51.09 tpy	29.47 tpy
12	Compressor Drive K-15	FG	3,777 hp	AP-42 Table 3.2-1	0.386 lb/MMBtu	108.20 tpy	51.09 tpy	6.33 tpy
13	Compressor Drive K-17	FG	4,000 hp	AP-42 Table 3.2-1	0.386 lb/MMBtu		54.10 tpy	28.12 tpy
14	Compressor Drive K-18	FG	4,000 hp	AP-42 Table 3.2-1	0.386 lb/MMBtu		54.10 tpy	17.89 tpy
24/25	Flare (150#)/Main Flare (900#)	FG	16.041 MMBtu/hr	AP-42 Table 13.5-2	0.31 lb/MMBtu	7.79 tpy	21.78 tpy	4.74 tpy
27	Flare 1-27	FG	0.345 MMscf/hr	AP-42 Table 13.5-2	0.31 lb/MMBtu		470.97 tpy	
28	Flare 1-33	FG	0.605 MMscf/hr	AP-42 Table 13.5-2	0.31 lb/MMBtu		825.90 tpy	
29	Flare 1-4	FG	3.744 MMscf/hr	AP-42 Table 13.5-2	0.31 lb/MMBtu		5,111.05 tpy	
30	Flare 1-9	FG	3.903 MMscf/hr	AP-42 Table 13.5-2	0.31 lb/MMBtu		5,328.11 tpy	
31	Flare 2-15	FG	0.126 MMscf/hr	AP-42 Table 13.5-2	0.31 lb/MMBtu		172.01 tpy	
32	Flare 3-4	FG	2.305 MMscf/hr	AP-42 Table 13.5-2	0.31 lb/MMBtu		3,146.63 tpy	
33	Flare 3-9	FG	2.085 MMscf/hr	AP-42 Table 13.5-2	0.31 lb/MMBtu	2,846.30 tpy		
36	TEG Regenerator Vent	N/A	105 MMscfd	N/A	N/A	0 tpy	0 tpy	0 tpy
37	TEG Regenerator Vent	N/A	105 MMscfd	N/A	N/A	0 tpy	0 tpy	0 tpy
38	Gasoline Dispensing Facility	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
39	Gasoline Dispensing Facility	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
40	Generator	Gasoline	19 kW	AP-42 Table 3.3-1	6.96E-03 lb/hp-hr	4.4E-02 tpy	4.4E-02 tpy	2.0E-03 tpy
41	Generator	Gasoline	19 kW	AP-42 Table 3.3-1	6.96E-03 lb/hp-hr	4.4E-02 tpy	4.4E-02 tpy	2.0E-03 tpy
43	Emergency Generator	FG	40 hp	AP-42 Table 3.2-3	3.72 lb/MMBtu	0.30 tpy	0.30 tpy	1.5E-02 tpy
44	Emergency Generator	FG	36 kW-e	NSPS Subpart JJJJ	387 g/hp-hr	19.57 tpy	19.57 tpy	0 tpy
45	Emergency Generator	FG	20 kW-e	NSPS Subpart JJJJ	387 g/hp-hr	7.0 tpy	7.0 tpy	0 tpy
46	Sand Pit Burner	FG	5 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	1.83 tpy	1.83 tpy	0.91 tpy
<i>Drill Rig Units</i>								
N/A	Drilling Boiler	Diesel	6.69 MMBtu/hr	AP-42 Table 1.3-1	5 lb/kgal	1.07 tpy	1.07 tpy	0.18 tpy
N/A	Drilling Boiler	Diesel	6.69 MMBtu/hr	AP-42 Table 1.3-1	5 lb/kgal	1.07 tpy	1.07 tpy	0.18 tpy
N/A	Drilling Heater	Diesel	4.2 MMBtu/hr	AP-42 Table 1.3-1	5 lb/kgal	0.67 tpy	0.67 tpy	0.11 tpy
N/A	Drilling Test Flare	FG	300 MMscf/yr	AP-42 Table 13.5-2	0.31 lb/MMBtu	46.75 tpy	46.75 tpy	0 tpy
Total						402.74 tpy	18,373.86 tpy	180.20 tpy

**Table D-5b. Insignificant Emission Unit Inventory - CO Emissions
Hilcorp Alaska, LLC - Swanson River Field**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Unlimited Potential Emissions
42a	Boiler	FG	2.7 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	0.99 tpy
N/A	Microturbines (x2)	FG	130 kW, total	AP-42 Table 3.1-1	0.082 lb/MMBtu	0.57 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	1.46 tpy
N/A	Space Heater	FG	0.3 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	0.11 tpy
N/A	Water Heater	FG	0.22 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	8.1E-02 tpy
N/A	Space Heaters (x2)	FG	0.02 MMBtu/hr, total	AP-42 Table 1.4-1	84 lb/MMscf	7.3E-03 tpy
N/A	Space Heater	FG	0.081 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	3.0E-02 tpy
N/A	Space Heater	FG	0.231 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	8.5E-02 tpy
N/A	Space Heaters (x4)	FG	0.3 MMBtu/hr, total	AP-42 Table 1.4-1	84 lb/MMscf	0.11 tpy
N/A	Space Heaters (x2)	FG	0.32 MMBtu/hr, total	AP-42 Table 1.4-1	84 lb/MMscf	0.12 tpy
N/A	Space Heater	FG	0.328 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	0.12 tpy
N/A	Space Heaters (x2)	FG	0.4 MMBtu/hr, total	AP-42 Table 1.4-1	84 lb/MMscf	0.15 tpy
N/A	Space Heaters (x2)	FG	0.8 MMBtu/hr, total	AP-42 Table 1.4-1	84 lb/MMscf	0.29 tpy
N/A	Space Heater	FG	0.312 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	0.11 tpy
N/A	Space Heater	FG	0.2 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	7.3E-02 tpy
N/A	Space Heater	FG	0.3 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	0.11 tpy
N/A	Reboilers (x2)	FG	1 MMBtu/hr, total	AP-42 Table 1.4-1	84 lb/MMscf	0.37 tpy
N/A	Heater	FG	1.5 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	0.55 tpy
N/A	Space Heater	Diesel	0.1 MMBtu/hr	AP-42 Table 1.3-1	5 lb/kgal	1.6E-02 tpy
N/A	Portable Heater	Diesel	0.3 MMBtu/hr	AP-42 Table 1.3-1	5 lb/kgal	4.8E-02 tpy
N/A	Pressure Washer	Diesel	0.4 MMBtu/hr	AP-42 Table 1.3-1	5 lb/kgal	6.4E-02 tpy
N/A	Portable Heaters (x3)	Diesel	1.5 MMBtu/hr, total	AP-42 Table 1.3-1	5 lb/kgal	0.24 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	1.46 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	1.46 tpy
N/A	Oil Heaters (x2)	FG	8 MMBtu/hr, total	AP-42 Table 1.4-1	84 lb/MMscf	2.93 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	1.46 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	1.46 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	1.46 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	1.46 tpy
N/A	Line Heaters (x61)	FG	61.9 MMBtu/hr, total	AP-42 Table 1.4-1	84 lb/MMscf	22.65 tpy
N/A	Line Heater	FG	1 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	0.37 tpy
N/A	Crude Oil Tank 22	N/A	327,138 gal	N/A	N/A	0 tpy
N/A	Produced Water Tanks (x2)	N/A	33,600 gal, total	N/A	N/A	0 tpy
N/A	Produced Water Tank	N/A	357 gal	N/A	N/A	0 tpy
N/A	Jet A/Diesel Tanks (x3)	N/A	18,000 gal, total	N/A	N/A	0 tpy
N/A	Jet A/Diesel Tank	N/A	6,044 gal	N/A	N/A	0 tpy
N/A	Jet A/Diesel Tanks (x2)	N/A	4,000 gal, total	N/A	N/A	0 tpy
N/A	Diesel Fuel Tank	N/A	2,169 gal	N/A	N/A	0 tpy
N/A	Kerosene (Jet A) Tank	N/A	500 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	2,169 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	2,000 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	90 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	75 gal	N/A	N/A	0 tpy
N/A	Xylene Tank	N/A	10,000 gal	N/A	N/A	0 tpy
N/A	Process Flare	Propane	0.0363 MMBtu/day	AP-42 Table 13.5-2	0.31 lb/MMBtu	2.1E-03 tpy
Total						40.43 tpy

Conversions:

Diesel Fuel Heat Content:	137,000 Btu/gal	EU ID 44 Heat Rate:	730 scf/hr
Liquid Fuel Density:	7 lb/gal	EU ID 45 Heat Rate:	260 scf/hr
Gasoline Heat Content:	125,000 Btu/gal	Microturbine Heat Rate:	12,200 Btu/kW-hr
Fuel Gas Heat Content:	1,005 Btu/scf	Propane Heat Value:	90,500 Btu/gal
Gas-Fired Engine Heat Rate:	8,000 Btu/hp-hr	Propane Density:	4.24 lb/gal

**Table D-6a. Significant Emission Unit Inventory - PM₁₀ Emissions
Hilcorp Alaska, LLC - Swanson River Field**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Limited Potential Emissions	Unlimited Potential Emissions	Estimated Actual Emissions
1	Plant Boiler F-201	FG	6.275 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	0.21 tpy	0.21 tpy	2.5E-03 tpy
2	Refuse Incinerator	Waste	150 lb/hr	AP-42 Table 2.1-12	15 lb/ton	1.13 tpy	4.93 tpy	5.6E-02 tpy
		FG	0.8 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	2.6E-02 tpy	2.6E-02 tpy	3.1E-04 tpy
8	Compressor Drive K-11	FG	3,777 hp	AP-42 Table 3.2-1	0.04831 lb/MMBtu	6.39 tpy	6.39 tpy	2.65 tpy
9	Compressor Drive K-12	FG	3,777 hp	AP-42 Table 3.2-1	0.04831 lb/MMBtu	6.39 tpy	6.39 tpy	4.31 tpy
10	Compressor Drive K-13	FG	3,777 hp	AP-42 Table 3.2-1	0.04831 lb/MMBtu	6.39 tpy	6.39 tpy	4.57 tpy
11	Compressor Drive K-14	FG	3,777 hp	AP-42 Table 3.2-1	0.04831 lb/MMBtu	6.39 tpy	6.39 tpy	3.69 tpy
12	Compressor Drive K-15	FG	3,777 hp	AP-42 Table 3.2-1	0.04831 lb/MMBtu	13.54 tpy	6.39 tpy	0.79 tpy
13	Compressor Drive K-17	FG	4,000 hp	AP-42 Table 3.2-1	0.04831 lb/MMBtu		6.77 tpy	3.52 tpy
14	Compressor Drive K-18	FG	4,000 hp	AP-42 Table 3.2-1	0.04831 lb/MMBtu		6.77 tpy	2.24 tpy
24/25	Flare (150#)/Main Flare (900#)	FG	16.041 MMBtu/hr	AP-42 Table 13.5-1	0.0265 lb/MMBtu		0.67 tpy	1.86 tpy
27	Flare 1-27	FG	0.345 MMscf/hr	AP-42 Table 13.5-1	0.0265 lb/MMBtu	40.25 tpy		
28	Flare 1-33	FG	0.605 MMscf/hr	AP-42 Table 13.5-1	0.0265 lb/MMBtu	70.59 tpy		
29	Flare 1-4	FG	3.744 MMscf/hr	AP-42 Table 13.5-1	0.0265 lb/MMBtu	436.82 tpy		
30	Flare 1-9	FG	3.903 MMscf/hr	AP-42 Table 13.5-1	0.0265 lb/MMBtu	455.37 tpy		
31	Flare 2-15	FG	0.126 MMscf/hr	AP-42 Table 13.5-1	0.0265 lb/MMBtu	14.70 tpy		
32	Flare 3-4	FG	2.305 MMscf/hr	AP-42 Table 13.5-1	0.0265 lb/MMBtu	268.93 tpy		
33	Flare 3-9	FG	2.085 MMscf/hr	AP-42 Table 13.5-1	0.0265 lb/MMBtu	243.26 tpy		
36	TEG Regenerator Vent	N/A	105 MMscfd	N/A	N/A	0 tpy	0 tpy	0 tpy
37	TEG Regenerator Vent	N/A	105 MMscfd	N/A	N/A	0 tpy	0 tpy	0 tpy
38	Gasoline Dispensing Facility	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
39	Gasoline Dispensing Facility	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
40	Generator	Gasoline	19 kW	AP-42 Table 3.3-1	7.21E-04 lb/hp-hr	4.6E-03 tpy	4.6E-03 tpy	2.1E-04 tpy
41	Generator	Gasoline	19 kW	AP-42 Table 3.3-1	7.21E-04 lb/hp-hr	4.6E-03 tpy	4.6E-03 tpy	2.1E-04 tpy
43	Emergency Generator	FG	40 hp	AP-42 Table 3.2-3	0.01941 lb/MMBtu	1.6E-03 tpy	1.6E-03 tpy	7.7E-05 tpy
44	Emergency Generator	FG	36 kW-e	AP-42 Table 3.2-3	0.01941 lb/MMBtu	3.6E-03 tpy	3.6E-03 tpy	0 tpy
45	Emergency Generator	FG	20 kW-e	AP-42 Table 3.2-3	0.01941 lb/MMBtu	1.3E-03 tpy	1.3E-03 tpy	0 tpy
46	Sand Pit Burner	FG	5 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	0.17 tpy	0.17 tpy	8.3E-02 tpy
<i>Drill Rig Units</i>								
N/A	Drilling Boiler	Diesel	6.69 MMBtu/hr	AP-42 Table 1.3-2 & 7	2.38 lb/kgal	0.51 tpy	0.51 tpy	8.5E-02 tpy
N/A	Drilling Boiler	Diesel	6.69 MMBtu/hr	AP-42 Table 1.3-2 & 7	2.38 lb/kgal	0.51 tpy	0.51 tpy	8.5E-02 tpy
N/A	Drilling Heater	Diesel	4.2 MMBtu/hr	AP-42 Table 1.3-2 & 7	2.38 lb/kgal	0.32 tpy	0.32 tpy	5.3E-02 tpy
N/A	Drilling Test Flare	FG	300 MMscf/yr	AP-42 Table 13.5-1	0.0265 lb/MMBtu	4.00 tpy	4.00 tpy	0 tpy
Total						46.66 tpy	1,587.98 tpy	22.54 tpy

**Table D-6b. Insignificant Emission Unit Inventory - PM₁₀ Emissions
Hilcorp Alaska, LLC - Swanson River Field**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Unlimited Potential Emissions
42a	Boiler	FG	2.7 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	8.9E-02 tpy
N/A	Microturbines (x2)	FG	130 kW, total	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	4.6E-02 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	0.13 tpy
N/A	Space Heater	FG	0.3 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	9.9E-03 tpy
N/A	Water Heater	FG	0.22 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	7.3E-03 tpy
N/A	Space Heaters (x2)	FG	0.02 MMBtu/hr, total	AP-42 Table 1.4-2	7.6 lb/MMscf	6.6E-04 tpy
N/A	Space Heater	FG	0.081 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	2.7E-03 tpy
N/A	Space Heater	FG	0.231 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	7.6E-03 tpy
N/A	Space Heaters (x4)	FG	0.3 MMBtu/hr, total	AP-42 Table 1.4-2	7.6 lb/MMscf	9.9E-03 tpy
N/A	Space Heaters (x2)	FG	0.32 MMBtu/hr, total	AP-42 Table 1.4-2	7.6 lb/MMscf	1.1E-02 tpy
N/A	Space Heater	FG	0.328 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	1.1E-02 tpy
N/A	Space Heaters (x2)	FG	0.4 MMBtu/hr, total	AP-42 Table 1.4-2	7.6 lb/MMscf	1.3E-02 tpy
N/A	Space Heaters (x2)	FG	0.8 MMBtu/hr, total	AP-42 Table 1.4-2	7.6 lb/MMscf	2.6E-02 tpy
N/A	Space Heater	FG	0.312 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	1.0E-02 tpy
N/A	Space Heater	FG	0.2 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	6.6E-03 tpy
N/A	Space Heater	FG	0.3 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	9.9E-03 tpy
N/A	Reboilers (x2)	FG	1 MMBtu/hr, total	AP-42 Table 1.4-2	7.6 lb/MMscf	3.3E-02 tpy
N/A	Heater	FG	1.5 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	5.0E-02 tpy
N/A	Space Heater	Diesel	0.1 MMBtu/hr	AP-42 Table 1.3-2 & 7	2.38 lb/kgal	7.6E-03 tpy
N/A	Portable Heater	Diesel	0.3 MMBtu/hr	AP-42 Table 1.3-2 & 7	2.38 lb/kgal	2.3E-02 tpy
N/A	Pressure Washer	Diesel	0.4 MMBtu/hr	AP-42 Table 1.3-2 & 7	2.38 lb/kgal	3.0E-02 tpy
N/A	Portable Heaters (x3)	Diesel	1.5 MMBtu/hr, total	AP-42 Table 1.3-2 & 7	2.38 lb/kgal	0.11 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	0.13 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	0.13 tpy
N/A	Oil Heaters (x2)	FG	8 MMBtu/hr, total	AP-42 Table 1.4-2	7.6 lb/MMscf	0.26 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	0.13 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	0.13 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	0.13 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	0.13 tpy
N/A	Line Heaters (x61)	FG	61.9 MMBtu/hr, total	AP-42 Table 1.4-2	7.6 lb/MMscf	2.05 tpy
N/A	Line Heater	FG	1 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	3.3E-02 tpy
N/A	Crude Oil Tank 22	N/A	327,138 gal	N/A	N/A	0 tpy
N/A	Produced Water Tanks (x2)	N/A	33,600 gal, total	N/A	N/A	0 tpy
N/A	Produced Water Tank	N/A	357 gal	N/A	N/A	0 tpy
N/A	Jet A/Diesel Tanks (x3)	N/A	18,000 gal, total	N/A	N/A	0 tpy
N/A	Jet A/Diesel Tank	N/A	6,044 gal	N/A	N/A	0 tpy
N/A	Jet A/Diesel Tanks (x2)	N/A	4,000 gal, total	N/A	N/A	0 tpy
N/A	Diesel Fuel Tank	N/A	2,169 gal	N/A	N/A	0 tpy
N/A	Kerosene (Jet A) Tank	N/A	500 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	2,169 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	2,000 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	90 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	75 gal	N/A	N/A	0 tpy
N/A	Xylene Tank	N/A	10,000 gal	N/A	N/A	0 tpy
N/A	Process Flare	Propane	0.0363 MMBtu/day	AP-42 Table 13.5-1	0.0265 lb/MMBtu	1.8E-04 tpy
Total						3.79 tpy

Conversions:

Diesel Fuel Heat Content:	137,000 Btu/gal	EU ID 44 Heat Rate:	730 scf/hr
Liquid Fuel Density:	7 lb/gal	EU ID 45 Heat Rate:	260 scf/hr
Gasoline Heat Content:	125,000 Btu/gal	Microturbine Heat Rate:	12,200 Btu/kW-hr
Fuel Gas Heat Content:	1,005 Btu/scf	Propane Heat Value:	90,500 Btu/gal
Gas-Fired Engine Heat Rate:	8,000 Btu/hp-hr	Propane Density:	4.24 lb/gal

**Table D-7a. Significant Emission Unit Inventory - VOC Emissions
Hilcorp Alaska, LLC - Swanson River Field**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Limited Potential Emissions	Unlimited Potential Emissions	Estimated Actual Emissions
1	Plant Boiler F-201	FG	6.275 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	0.15 tpy	0.15 tpy	1.8E-03 tpy
2	Refuse Incinerator	Waste	150 lb/hr	AP-42 Table 2.1-12	15 lb/ton	1.13 tpy	4.93 tpy	5.6E-02 tpy
		FG	0.8 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	1.9E-02 tpy	1.9E-02 tpy	2.3E-04 tpy
8	Compressor Drive K-11	FG	3,777 hp	AP-42 Table 3.2-1	0.12 lb/MMBtu	15.88 tpy	15.88 tpy	6.59 tpy
9	Compressor Drive K-12	FG	3,777 hp	AP-42 Table 3.2-1	0.12 lb/MMBtu	15.88 tpy	15.88 tpy	10.70 tpy
10	Compressor Drive K-13	FG	3,777 hp	AP-42 Table 3.2-1	0.12 lb/MMBtu	15.88 tpy	15.88 tpy	11.36 tpy
11	Compressor Drive K-14	FG	3,777 hp	AP-42 Table 3.2-1	0.12 lb/MMBtu	15.88 tpy	15.88 tpy	9.16 tpy
12	Compressor Drive K-15	FG	3,777 hp	AP-42 Table 3.2-1	0.12 lb/MMBtu	33.64 tpy	15.88 tpy	1.97 tpy
13	Compressor Drive K-17	FG	4,000 hp	AP-42 Table 3.2-1	0.12 lb/MMBtu		16.82 tpy	8.74 tpy
14	Compressor Drive K-18	FG	4,000 hp	AP-42 Table 3.2-1	0.12 lb/MMBtu		16.82 tpy	5.56 tpy
24/25	Flare (150#)/Main Flare (900#)	FG	16.041 MMBtu/hr	AP-42 Table 13.5-2	0.66 lb/MMBtu		16.59 tpy	46.37 tpy
27	Flare 1-27	FG	0.345 MMscf/hr	AP-42 Table 13.5-2	0.66 lb/MMBtu	1,002.71 tpy		
28	Flare 1-33	FG	0.605 MMscf/hr	AP-42 Table 13.5-2	0.66 lb/MMBtu	1,758.38 tpy		
29	Flare 1-4	FG	3.744 MMscf/hr	AP-42 Table 13.5-2	0.66 lb/MMBtu	10,881.60 tpy		
30	Flare 1-9	FG	3.903 MMscf/hr	AP-42 Table 13.5-2	0.66 lb/MMBtu	11,343.72 tpy		
31	Flare 2-15	FG	0.126 MMscf/hr	AP-42 Table 13.5-2	0.66 lb/MMBtu	366.21 tpy		
32	Flare 3-4	FG	2.305 MMscf/hr	AP-42 Table 13.5-2	0.66 lb/MMBtu	6,699.28 tpy		
33	Flare 3-9	FG	2.085 MMscf/hr	AP-42 Table 13.5-2	0.66 lb/MMBtu	6,059.87 tpy		
36	TEG Regenerator Vent	N/A	105 MMscfd	GRI-GLYCalc	N/A	11.7 tpy	11.7 tpy	11.7 tpy
37	TEG Regenerator Vent	N/A	105 MMscfd	GRI-GLYCalc	N/A	11.7 tpy	11.7 tpy	11.7 tpy
38	Gasoline Dispensing Facility	N/A	N/A	AP-42 Table 5.2-7	24.2 lb/kgal	14.52 tpy	14.52 tpy	4.98 tpy
39	Gasoline Dispensing Facility	N/A	N/A	AP-42 Table 5.2-7	24.2 lb/kgal	14.52 tpy	14.52 tpy	0 tpy
40	Generator	Gasoline	19 kW	AP-42 Table 3.3-1	0.015 lb/hp-hr	0.10 tpy	0.10 tpy	4.4E-03 tpy
41	Generator	Gasoline	19 kW	AP-42 Table 3.3-1	0.015 lb/hp-hr	0.10 tpy	0.10 tpy	4.4E-03 tpy
43	Emergency Generator	FG	40 hp	AP-42 Table 3.2-3	0.0296 lb/MMBtu	2.4E-03 tpy	2.4E-03 tpy	1.2E-04 tpy
44	Emergency Generator	FG	36 kW-e	NSPS Subpart JJJJ	10 g/hp-hr	0.51 tpy	0.51 tpy	0 tpy
45	Emergency Generator	FG	20 kW-e	NSPS Subpart JJJJ	10 g/hp-hr	0.18 tpy	0.18 tpy	0 tpy
46	Sand Pit Burner	FG	5 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	0.12 tpy	0.12 tpy	6.0E-02 tpy
<i>Drill Rig Units</i>								
N/A	Drilling Boiler	Diesel	6.69 MMBtu/hr	AP-42 Table 1.3-3	0.34 lb/kgal	7.3E-02 tpy	7.3E-02 tpy	1.2E-02 tpy
N/A	Drilling Boiler	Diesel	6.69 MMBtu/hr	AP-42 Table 1.3-3	0.34 lb/kgal	7.3E-02 tpy	7.3E-02 tpy	1.2E-02 tpy
N/A	Drilling Heater	Diesel	4.2 MMBtu/hr	AP-42 Table 1.3-3	0.34 lb/kgal	4.6E-02 tpy	4.6E-02 tpy	7.6E-03 tpy
N/A	Drilling Test Flare	FG	300 MMscf/yr	AP-42 Table 13.5-2	0.66 lb/MMBtu	99.53 tpy	99.53 tpy	0 tpy
Total						268.29 tpy	38,429.51 tpy	92.78 tpy

**Table D-7b. Insignificant Emission Unit Inventory - VOC Emissions
Hilcorp Alaska, LLC - Swanson River Field**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Unlimited Potential Emissions
42a	Boiler	FG	2.7 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	6.5E-02 tpy
N/A	Microturbines (x2)	FG	130 kW, total	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	1.5E-02 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	9.6E-02 tpy
N/A	Space Heater	FG	0.3 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	7.2E-03 tpy
N/A	Water Heater	FG	0.22 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	5.3E-03 tpy
N/A	Space Heaters (x2)	FG	0.02 MMBtu/hr, total	AP-42 Table 1.4-2	5.5 lb/MMscf	4.8E-04 tpy
N/A	Space Heater	FG	0.081 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	1.9E-03 tpy
N/A	Space Heater	FG	0.231 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	5.5E-03 tpy
N/A	Space Heaters (x4)	FG	0.3 MMBtu/hr, total	AP-42 Table 1.4-2	5.5 lb/MMscf	7.2E-03 tpy
N/A	Space Heaters (x2)	FG	0.32 MMBtu/hr, total	AP-42 Table 1.4-2	5.5 lb/MMscf	7.7E-03 tpy
N/A	Space Heater	FG	0.328 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	7.9E-03 tpy
N/A	Space Heaters (x2)	FG	0.4 MMBtu/hr, total	AP-42 Table 1.4-2	5.5 lb/MMscf	9.6E-03 tpy
N/A	Space Heaters (x2)	FG	0.8 MMBtu/hr, total	AP-42 Table 1.4-2	5.5 lb/MMscf	1.9E-02 tpy
N/A	Space Heater	FG	0.312 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	7.5E-03 tpy
N/A	Space Heater	FG	0.2 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	4.8E-03 tpy
N/A	Space Heater	FG	0.3 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	7.2E-03 tpy
N/A	Reboilers (x2)	FG	1 MMBtu/hr, total	AP-42 Table 1.4-2	5.5 lb/MMscf	2.4E-02 tpy
N/A	Heater	FG	1.5 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	3.6E-02 tpy
N/A	Space Heater	Diesel	0.1 MMBtu/hr	AP-42 Table 1.3-3	0.34 lb/kgal	1.1E-03 tpy
N/A	Portable Heater	Diesel	0.3 MMBtu/hr	AP-42 Table 1.3-3	0.34 lb/kgal	3.3E-03 tpy
N/A	Pressure Washer	Diesel	0.4 MMBtu/hr	AP-42 Table 1.3-3	0.34 lb/kgal	4.3E-03 tpy
N/A	Portable Heaters (x3)	Diesel	1.5 MMBtu/hr, total	AP-42 Table 1.3-3	0.34 lb/kgal	1.6E-02 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	9.6E-02 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	9.6E-02 tpy
N/A	Oil Heaters (x2)	FG	8 MMBtu/hr, total	AP-42 Table 1.4-2	5.5 lb/MMscf	0.19 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	9.6E-02 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	9.6E-02 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	9.6E-02 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	9.6E-02 tpy
N/A	Line Heaters (x61)	FG	61.9 MMBtu/hr, total	AP-42 Table 1.4-2	5.5 lb/MMscf	1.48 tpy
N/A	Line Heater	FG	1 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	2.4E-02 tpy
N/A	Crude Oil Tank 22	N/A	327,138 gal	AP-42 Section 7.1 (see Table D-7c)		0.43 tpy
N/A	Produced Water Tanks (x2)	N/A	33,600 gal, total	AP-42 Section 7.1 (see Table D-7c)		0.21 tpy
N/A	Produced Water Tank	N/A	357 gal	AP-42 Section 7.1 (see Table D-7c)		0.11 tpy
N/A	Jet A/Diesel Tanks (x3)	N/A	18,000 gal, total	AP-42 Section 7.1 (see Table D-7c)		1.1E-03 tpy
N/A	Jet A/Diesel Tank	N/A	6,044 gal	AP-42 Section 7.1 (see Table D-7c)		3.7E-04 tpy
N/A	Jet A/Diesel Tanks (x2)	N/A	4,000 gal, total	AP-42 Section 7.1 (see Table D-7c)		7.4E-04 tpy
N/A	Diesel Fuel Tank	N/A	2,169 gal	AP-42 Section 7.1 (see Table D-7c)		3.7E-04 tpy
N/A	Kerosene (Jet A) Tank	N/A	500 gal	AP-42 Section 7.1 (see Table D-7c)		3.7E-04 tpy
N/A	Gasoline Tank	N/A	2,169 gal	AP-42 Section 7.1 (see Table D-7c)		5.7E-02 tpy
N/A	Gasoline Tank	N/A	2,000 gal	AP-42 Section 7.1 (see Table D-7c)		5.7E-02 tpy
N/A	Gasoline Tank	N/A	90 gal	N/A		0 tpy
N/A	Gasoline Tank	N/A	75 gal	N/A		0 tpy
N/A	Xylene Tank	N/A	10,000 gal	AP-42 Section 7.1 (see Table D-7c)		3.8E-03 tpy
N/A	Process Flare	Propane	0.0363 MMBtu/day	AP-42 Table 13.5-2	0.66 lb/MMBtu	4.4E-03 tpy
Total						3.50 tpy

Conversions:

Diesel Fuel Heat Content:	137,000 Btu/gal	EU ID 44 Heat Rate:	730 scf/hr
Liquid Fuel Density:	7 lb/gal	EU ID 45 Heat Rate:	260 scf/hr
Gasoline Heat Content:	125,000 Btu/gal	Microturbine Heat Rate:	12,200 Btu/kW-hr
Fuel Gas Heat Content:	1,005 Btu/scf	Propane Heat Value:	90,500 Btu/gal
Gas-Fired Engine Heat Rate:	8,000 Btu/hp-hr	Propane Density:	4.24 lb/gal

Table D-7c. Tank VOC and HAP Emission Calculations
Hilcorp Alaska, LLC - Swanson River Field

Emission Calculations ¹						
Parameter	Tank 22	Produced Water Tank	Diesel Tank	Gasoline Tank	Xylene Tank	Equation
Standing Loss (L_s) Calculations						
Vapor Space Expansion Factor, K _E	0.039	0.039	0.039	0.039	0.039	Eq. 1-12
Roof Outage, H _{RO} (ft)	0.47	0.13	NA	NA	NA	Eq. 1-19
Effective Height, H _E (ft)	NA	NA	7.07	4.71	8.64	Eq. 1-15
Vapor Space Outage, H _{VO} (ft)	17.08	10.82	3.53	2.36	4.32	Eq. 1-18
Average Daily Temp, T _{AA} (°R)	496.22	496.22	496.22	496.22	496.22	Eq. 1-32
Liquid Bulk Temp, T _B (°R)	498.00	498.00	498.00	498.00	498.00	Eq. 1-33
Average Daily Liquid Temp, T _{LA} (°R)	500.27	500.27	500.27	500.27	500.27	Eq. 1-30
Vapor Pressure, P _{VA} (psia)	1.3973	1.3973	0.0033	3.5077	0.0351	Eq. 1-27/1-28
Vented Vapor Sat Factor, K _S	0.4415	0.5551	0.9994	0.6954	0.9920	Eq. 1-23
Average Vapor Temp, T _V (°R)	502.11	502.11	502.11	502.11	502.11	Eq. 1-35
Vapor Density, W _V (lb/ft ³)	1.30E-02	1.30E-02	8.04E-05	4.30E-02	6.92E-04	Eq. 1-24
Effective Diameter, D _E (ft)	N/A	N/A	12.2	9.0	14.3	Eq. 1-14
Vapor Space Volume, V _V (ft ³)	27,168.54	1,223.94	413.51	148.44	688.99	Eq. 1-3
Standing Loss, L _S (lb/yr)	2,224.46	126.00	0.48	63.43	6.76	Eq. 1-2
Working Loss (L_w) Calculations						
Annual Sum Liquid, ΣH _{QL} (ft/yr)	1,131.05	79.42	27.62	18.41	8.38	Eq. 1-39
Maximum Liquid Height, H _{LX} (ft)	27.00	19.00	7.07	4.71	8.64	Eq. 1-39
Minimum Liquid Height, H _{LN} (ft)	1	1	0	0	0	Eq. 1-39
Number of Turnovers, N	44	4	4	4	1	Eq. 1-38
Factors, K _N , K _B	1	1	1	1	1	Eq. 1-37
Factor, K _P	0.75	0.75	1	1	1	Eq. 1-39
Net Working Loss, V _Q (ft ³ /yr)	1,798,855	8,982	3,232	1,160	1,337	Eq. 1-41
Working Loss, L _w (lb/yr)	14,980.00	87.35	0.26	49.83	0.92	Eq. 1-37
Total VOCs (lb/yr) ³ :	860.22	213.36	0.74	113.26	7.68	Eq. 1-1
Total VOCs (tpy)³:	0.43	0.11	3.7E-04	5.7E-02	3.8E-03	
HAP Emissions (tpy)						
Benzene	6.1E-03	1.5E-03	9.5E-06	8.0E-04	0	
Cumene	4.3E-05	1.1E-05	1.8E-07	5.7E-06	0	
Ethylbenzene	2.6E-04	6.4E-05	1.2E-06	3.4E-05	5.4E-04	
Hexane	1.6E-02	4.0E-03	2.1E-05	2.1E-03	0	
Toluene	5.4E-03	1.3E-03	7.6E-06	7.1E-04	3.8E-05	
Xylenes (isomers and mixture)	1.7E-04	4.3E-05	4.8E-07	2.3E-05	3.3E-03	
Total HAPs (tpy)³:	2.8E-02	7.0E-03	3.9E-05	3.7E-03	3.8E-03	

Notes:

- ¹ Reference: AP-42 Section 7.1.
- ² Tanks throughput assumed to be one tank volume per quarter except xylene tank assumed to be one tank volume per year; crude tank used actual data for 2023.
- ³ Tank 22 uses vapor recovery and recovered gas is sent back to the process; estimated at 95% reduction of VOC and HAP emissions.
- ⁴ EPA SPECIATE online profiles and safety data sheets.

Tank Information					
Parameter	Tank 22	Produced Water Tank	Diesel Tank	Gasoline Tank	Xylene Tank
Tank Contents	Crude	Prod. Water	Diesel	Gasoline	Xylene
Tank Capacity (gallons)	327,138	16,800	6,044	2,169	10,000
Orientation	Vertical	Vertical	Horizontal	Horizontal	Horizontal
Diameter (ft)	45	12	9	6.0	11
Length (ft) / Height (ft)	28	20	13	10.5	14.5
Color	Gray (med)	Gray (med)	Gray (med)	Gray (med)	Gray (med)
Roof	Dome	Dome	N/A	N/A	N/A
Throughput (gal/yr) ²	13,457,766	67,200	24,176	8,676	10,000
Paint Condition	Average	Average	Average	Average	Average
Paint Solar Absorptance, α	0.71	0.71	0.71	0.71	0.71

Meteorological Inputs (Kenai, AK)		
Average Daily Max Temp, T _{AX}	43.6 °F	503.3 °R
Average Daily Min Temp, T _{AN}	29.5 °F	489.2 °R
Insolation Factor, i	838 Btu/ft ² -d	

Fuel Constants				
Parameter	Crude	Diesel	Gasoline	Xylene
Vapor Molecular Weight, M _V (lb/lb-mol)	50	130	66	106.17
Vapor Pressure Constant, A	11.48	12.101	11.724	7.009
Vapor Pressure Constant, B	5,575.3	8,907.0	5,237.3	1,474.7
Vapor Pressure Constant, C	NA	NA	NA	213.69
RVP (psi)	4.0	N/A	N/A	N/A

Component Vapor Mass Percent ⁴				
Component	Crude	Diesel	Gasoline	Xylene
Benzene	1.41	2.57	1.41	0
Cumene	0.01	0.05	0.01	0
Ethylbenzene	0.06	0.32	0.06	14
Hexane	3.75	5.61	3.75	0
Toluene	1.25	2.06	1.25	1
Xylenes	0.04	0.13	0.04	85

**Table D-8a. Significant Emission Unit Inventory - SO₂ Emissions
Hilcorp Alaska, LLC - Swanson River Field**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Limited Potential Emissions	Unlimited Potential Emissions	Estimated Actual Emissions
1	Plant Boiler F-201	FG	6.275 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	0.12 tpy	0.12 tpy	1.4E-03 tpy
2	Refuse Incinerator	Waste	150 lb/hr	AP-42 Table 2.1-12	2.5 lb/ton	0.19 tpy	0.82 tpy	9.4E-03 tpy
		FG	0.8 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	1.5E-02 tpy	1.5E-02 tpy	1.7E-04 tpy
8	Compressor Drive K-11	FG	3,777 hp	Mass Balance	25 ppmv H ₂ S	0.55 tpy	0.55 tpy	0.23 tpy
9	Compressor Drive K-12	FG	3,777 hp	Mass Balance	25 ppmv H ₂ S	0.55 tpy	0.55 tpy	0.37 tpy
10	Compressor Drive K-13	FG	3,777 hp	Mass Balance	25 ppmv H ₂ S	0.55 tpy	0.55 tpy	0.40 tpy
11	Compressor Drive K-14	FG	3,777 hp	Mass Balance	25 ppmv H ₂ S	0.55 tpy	0.55 tpy	0.32 tpy
12	Compressor Drive K-15	FG	3,777 hp	Mass Balance	25 ppmv H ₂ S	1.17 tpy	0.55 tpy	6.9E-02 tpy
13	Compressor Drive K-17	FG	4,000 hp	Mass Balance	25 ppmv H ₂ S		0.59 tpy	0.31 tpy
14	Compressor Drive K-18	FG	4,000 hp	Mass Balance	25 ppmv H ₂ S		0.59 tpy	0.19 tpy
24/25	Flare (150#)/Main Flare (900#)	FG	16.041 MMBtu/hr	Mass Balance	25 ppmv H ₂ S		0.11 tpy	0.29 tpy
27	Flare 1-27	FG	0.345 MMscf/hr	Mass Balance	25 ppmv H ₂ S	6.36 tpy		
28	Flare 1-33	FG	0.605 MMscf/hr	Mass Balance	25 ppmv H ₂ S	11.16 tpy		
29	Flare 1-4	FG	3.744 MMscf/hr	Mass Balance	25 ppmv H ₂ S	69.07 tpy		
30	Flare 1-9	FG	3.903 MMscf/hr	Mass Balance	25 ppmv H ₂ S	72.00 tpy		
31	Flare 2-15	FG	0.126 MMscf/hr	Mass Balance	25 ppmv H ₂ S	2.32 tpy		
32	Flare 3-4	FG	2.305 MMscf/hr	Mass Balance	25 ppmv H ₂ S	42.52 tpy		
33	Flare 3-9	FG	2.085 MMscf/hr	Mass Balance	25 ppmv H ₂ S	38.46 tpy		
36	TEG Regenerator Vent	N/A	105 MMscfd	N/A	N/A	0 tpy	0 tpy	0 tpy
37	TEG Regenerator Vent	N/A	105 MMscfd	N/A	N/A	0 tpy	0 tpy	0 tpy
38	Gasoline Dispensing Facility	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
39	Gasoline Dispensing Facility	N/A	N/A	N/A	N/A	0 tpy	0 tpy	0 tpy
40	Generator	Gasoline	19 kW	Mass Balance	0.05 wt.%S	2.9E-03 tpy	2.9E-03 tpy	1.3E-04 tpy
41	Generator	Gasoline	19 kW	Mass Balance	0.05 wt.%S	2.9E-03 tpy	2.9E-03 tpy	1.3E-04 tpy
43	Emergency Generator	FG	40 hp	Mass Balance	25 ppmv H ₂ S	3.4E-04 tpy	3.4E-04 tpy	1.7E-05 tpy
44	Emergency Generator	FG	36 kW-e	Mass Balance	25 ppmv H ₂ S	7.7E-04 tpy	7.7E-04 tpy	0 tpy
45	Emergency Generator	FG	20 kW-e	Mass Balance	25 ppmv H ₂ S	2.7E-04 tpy	2.7E-04 tpy	0 tpy
46	Sand Pit Burner	FG	5 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	9.2E-02 tpy	9.2E-02 tpy	4.6E-02 tpy
<i>Drill Rig Units</i>								
N/A	Drilling Boiler	Diesel	6.69 MMBtu/hr	Mass Balance	0.5 wt.%S	14.97 tpy	14.97 tpy	2.50 tpy
N/A	Drilling Boiler	Diesel	6.69 MMBtu/hr	Mass Balance	0.5 wt.%S	14.97 tpy	14.97 tpy	2.50 tpy
N/A	Drilling Heater	Diesel	4.2 MMBtu/hr	Mass Balance	0.5 wt.%S	9.4 tpy	9.4 tpy	1.57 tpy
N/A	Drilling Test Flare	FG	300 MMscf/yr	Mass Balance	25 ppmv H ₂ S	0.63 tpy	0.63 tpy	0 tpy
Total						43.89 tpy	287.16 tpy	8.58 tpy

**Table D-8b. Insignificant Emission Unit Inventory - SO₂ Emissions
Hilcorp Alaska, LLC - Swanson River Field**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Unlimited Potential Emissions
42a	Boiler	FG	2.7 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	5.0E-02 tpy
N/A	Microturbines (x2)	FG	130 kW, total	Mass Balance	25 ppmv H ₂ S	2.9E-02 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	7.3E-02 tpy
N/A	Space Heater	FG	0.3 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	5.5E-03 tpy
N/A	Water Heater	FG	0.22 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	4.0E-03 tpy
N/A	Space Heaters (x2)	FG	0.02 MMBtu/hr, total	Mass Balance	25 ppmv H ₂ S	3.7E-04 tpy
N/A	Space Heater	FG	0.081 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	1.5E-03 tpy
N/A	Space Heater	FG	0.231 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	4.2E-03 tpy
N/A	Space Heaters (x4)	FG	0.3 MMBtu/hr, total	Mass Balance	25 ppmv H ₂ S	5.5E-03 tpy
N/A	Space Heaters (x2)	FG	0.32 MMBtu/hr, total	Mass Balance	25 ppmv H ₂ S	5.9E-03 tpy
N/A	Space Heater	FG	0.328 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	6.0E-03 tpy
N/A	Space Heaters (x2)	FG	0.4 MMBtu/hr, total	Mass Balance	25 ppmv H ₂ S	7.3E-03 tpy
N/A	Space Heaters (x2)	FG	0.8 MMBtu/hr, total	Mass Balance	25 ppmv H ₂ S	1.5E-02 tpy
N/A	Space Heater	FG	0.312 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	5.7E-03 tpy
N/A	Space Heater	FG	0.2 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	3.7E-03 tpy
N/A	Space Heater	FG	0.3 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	5.5E-03 tpy
N/A	Reboilers (x2)	FG	1 MMBtu/hr, total	Mass Balance	25 ppmv H ₂ S	1.8E-02 tpy
N/A	Heater	FG	1.5 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	2.8E-02 tpy
N/A	Space Heater	Diesel	0.1 MMBtu/hr	Mass Balance	0.5 wt.%S	0.22 tpy
N/A	Portable Heater	Diesel	0.3 MMBtu/hr	Mass Balance	0.5 wt.%S	0.67 tpy
N/A	Pressure Washer	Diesel	0.4 MMBtu/hr	Mass Balance	0.5 wt.%S	0.90 tpy
N/A	Portable Heaters (x3)	Diesel	1.5 MMBtu/hr, total	Mass Balance	0.5 wt.%S	3.36 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	7.3E-02 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	7.3E-02 tpy
N/A	Oil Heaters (x2)	FG	8 MMBtu/hr, total	Mass Balance	25 ppmv H ₂ S	0.15 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	7.3E-02 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	7.3E-02 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	7.3E-02 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	7.3E-02 tpy
N/A	Line Heaters (x61)	FG	61.9 MMBtu/hr, total	Mass Balance	25 ppmv H ₂ S	1.14 tpy
N/A	Line Heater	FG	1 MMBtu/hr	Mass Balance	25 ppmv H ₂ S	1.8E-02 tpy
N/A	Crude Oil Tank 22	N/A	327,138 gal	N/A	N/A	0 tpy
N/A	Produced Water Tanks (x2)	N/A	33,600 gal, total	N/A	N/A	0 tpy
N/A	Produced Water Tank	N/A	357 gal	N/A	N/A	0 tpy
N/A	Jet A/Diesel Tanks (x3)	N/A	18,000 gal, total	N/A	N/A	0 tpy
N/A	Jet A/Diesel Tank	N/A	6,044 gal	N/A	N/A	0 tpy
N/A	Jet A/Diesel Tanks (x2)	N/A	4,000 gal, total	N/A	N/A	0 tpy
N/A	Diesel Fuel Tank	N/A	2,169 gal	N/A	N/A	0 tpy
N/A	Kerosene (Jet A) Tank	N/A	500 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	2,169 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	2,000 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	90 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	75 gal	N/A	N/A	0 tpy
N/A	Xylene Tank	N/A	10000 gal	N/A	N/A	0 tpy
N/A	Process Flare	Propane	0.0363 MMBtu/day	Mass Balance	185 ppmw S	1.1E-04 tpy
Total						7.16 tpy

Conversions:

Diesel Fuel Heat Content:	137,000 Btu/gal	EU ID 44 Heat Rate:	730 scf/hr
Liquid Fuel Density:	7 lb/gal	EU ID 45 Heat Rate:	260 scf/hr
Gasoline Heat Content:	125,000 Btu/gal	Microturbine Heat Rate:	12,200 Btu/kW-hr
Fuel Gas Heat Content:	1,005 Btu/scf	Propane Heat Value:	90,500 Btu/gal
Gas-Fired Engine Heat Rate:	8,000 Btu/hp-hr	Propane Density:	4.24 lb/gal

**Table D-9a. Significant Emission Unit Inventory - CO₂e Emissions
Hilcorp Alaska, LLC - Swanson River Field**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Limited Potential Emissions	Unlimited Potential Emissions	Estimated Actual Emissions
1	Plant Boiler F-201	FG	6.275 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	3,218 tpy	3,218 tpy	39 tpy
2	Refuse Incinerator	Waste	150 lb/hr	40 CFR 98 Tables C-1 & 2	92.75 kg/MMBtu	153 tpy	668 tpy	8 tpy
		FG	0.8 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	410 tpy	410 tpy	5 tpy
8	Compressor Drive K-11	FG	3,777 hp	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	15,497 tpy	15,497 tpy	6,429 tpy
9	Compressor Drive K-12	FG	3,777 hp	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	15,497 tpy	15,497 tpy	10,438 tpy
10	Compressor Drive K-13	FG	3,777 hp	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	15,497 tpy	15,497 tpy	11,088 tpy
11	Compressor Drive K-14	FG	3,777 hp	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	15,497 tpy	15,497 tpy	8,939 tpy
12	Compressor Drive K-15	FG	3,777 hp	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	32,825 tpy	15,497 tpy	1,919 tpy
13	Compressor Drive K-17	FG	4,000 hp	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu		16,412 tpy	8,530 tpy
14	Compressor Drive K-18	FG	4,000 hp	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu		16,412 tpy	5,428 tpy
24/25	Flare (150#)/Main Flare (900#)	FG	16.041 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	2,943 tpy	8,227 tpy	1,789 tpy
27	Flare 1-27	FG	0.345 MMscf/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu		177,902 tpy	
28	Flare 1-33	FG	0.605 MMscf/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu		311,973 tpy	
29	Flare 1-4	FG	3.744 MMscf/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu		1,930,626 tpy	
30	Flare 1-9	FG	3.903 MMscf/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu		2,012,616 tpy	
31	Flare 2-15	FG	0.126 MMscf/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu		64,973 tpy	
32	Flare 3-4	FG	2.305 MMscf/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu		1,188,593 tpy	
33	Flare 3-9	FG	2.085 MMscf/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu		1,075,148 tpy	
36	TEG Regenerator Vent	N/A	105 MMscfd	GRI-GLYCalc	N/A	32 tpy	32 tpy	32 tpy
37	TEG Regenerator Vent	N/A	105 MMscfd	GRI-GLYCalc	N/A	32 tpy	32 tpy	32 tpy
38	Gasoline Dispensing Facility	N/A	N/A	40 CFR 98 Tables C-1 & 2	N/A	0 tpy	0 tpy	0 tpy
39	Gasoline Dispensing Facility	N/A	N/A	40 CFR 98 Tables C-1 & 2	N/A	0 tpy	0 tpy	0 tpy
40	Generator	Gasoline	19 kW	40 CFR 98 Tables C-1 & 2	70.47 kg/MMBtu	8 tpy	8 tpy	0.4 tpy
41	Generator	Gasoline	19 kW	40 CFR 98 Tables C-1 & 2	70.47 kg/MMBtu	8 tpy	8 tpy	0.4 tpy
43	Emergency Generator	FG	40 hp	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	9 tpy	9 tpy	0.5 tpy
44	Emergency Generator	FG	36 kW-e	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	21 tpy	21 tpy	0 tpy
45	Emergency Generator	FG	20 kW-e	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	8 tpy	8 tpy	0 tpy
46	Sand Pit Burner	FG	5 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	2,564 tpy	2,564 tpy	1,282 tpy
<i>Drill Rig Units</i>								
N/A	Drilling Boiler	Diesel	6.69 MMBtu/hr	40 CFR 98 Tables C-1 & 2	74.21 kg/MMBtu	4,794 tpy	4,794 tpy	801 tpy
N/A	Drilling Boiler	Diesel	6.69 MMBtu/hr	40 CFR 98 Tables C-1 & 2	74.21 kg/MMBtu	4,794 tpy	4,794 tpy	801 tpy
N/A	Drilling Heater	Diesel	4.2 MMBtu/hr	40 CFR 98 Tables C-1 & 2	74.21 kg/MMBtu	3,010 tpy	3,010 tpy	503 tpy
N/A	Drilling Test Flare	FG	300 MMscf/yr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	17,660 tpy	17,660 tpy	0 tpy
Total						134,479 tpy	6,917,608 tpy	58,065 tpy

**Table D-9b. Insignificant Emission Unit Inventory - CO₂e Emissions
Hilcorp Alaska, LLC - Swanson River Field**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Unlimited Potential Emissions
42a	Boiler	FG	2.7 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	1,385 tpy
N/A	Microturbines (x2)	FG	130 kW, total	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	813 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	2,052 tpy
N/A	Space Heater	FG	0.3 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	154 tpy
N/A	Water Heater	FG	0.22 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	113 tpy
N/A	Space Heaters (x2)	FG	0.02 MMBtu/hr, total	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	10 tpy
N/A	Space Heater	FG	0.081 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	42 tpy
N/A	Space Heater	FG	0.231 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	118 tpy
N/A	Space Heaters (x4)	FG	0.3 MMBtu/hr, total	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	154 tpy
N/A	Space Heaters (x2)	FG	0.32 MMBtu/hr, total	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	164 tpy
N/A	Space Heater	FG	0.328 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	168 tpy
N/A	Space Heaters (x2)	FG	0.4 MMBtu/hr, total	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	205 tpy
N/A	Space Heaters (x2)	FG	0.8 MMBtu/hr, total	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	410 tpy
N/A	Space Heater	FG	0.312 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	160 tpy
N/A	Space Heater	FG	0.2 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	103 tpy
N/A	Space Heater	FG	0.3 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	154 tpy
N/A	Reboilers (x2)	FG	1 MMBtu/hr, total	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	513 tpy
N/A	Heater	FG	1.5 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	769 tpy
N/A	Space Heater	Diesel	0.1 MMBtu/hr	40 CFR 98 Tables C-1 & 2	74.21 kg/MMBtu	72 tpy
N/A	Portable Heater	Diesel	0.3 MMBtu/hr	40 CFR 98 Tables C-1 & 2	74.21 kg/MMBtu	215 tpy
N/A	Pressure Washer	Diesel	0.4 MMBtu/hr	40 CFR 98 Tables C-1 & 2	74.21 kg/MMBtu	287 tpy
N/A	Portable Heaters (x3)	Diesel	1.5 MMBtu/hr, total	40 CFR 98 Tables C-1 & 2	74.21 kg/MMBtu	1,075 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	2,052 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	2,052 tpy
N/A	Oil Heaters (x2)	FG	8 MMBtu/hr, total	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	4,103 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	2,052 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	2,052 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	2,052 tpy
N/A	Oil Heater	FG	4 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	2,052 tpy
N/A	Line Heaters (x61)	FG	61.9 MMBtu/hr, total	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	31,748 tpy
N/A	Line Heater	FG	1 MMBtu/hr	40 CFR 98 Tables C-1 & 2	53.11 kg/MMBtu	513 tpy
N/A	Crude Oil Tank 22	N/A	327,138 gal	N/A	N/A	0 tpy
N/A	Produced Water Tanks (x2)	N/A	33,600 gal, total	N/A	N/A	0 tpy
N/A	Produced Water Tank	N/A	357 gal	N/A	N/A	0 tpy
N/A	Jet A/Diesel Tanks (x3)	N/A	18,000 gal, total	N/A	N/A	0 tpy
N/A	Jet A/Diesel Tank	N/A	6,044 gal	N/A	N/A	0 tpy
N/A	Jet A/Diesel Tanks (x2)	N/A	4,000 gal, total	N/A	N/A	0 tpy
N/A	Diesel Fuel Tank	N/A	2,169 gal	N/A	N/A	0 tpy
N/A	Kerosene (Jet A) Tank	N/A	500 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	2,169 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	2,000 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	90 gal	N/A	N/A	0 tpy
N/A	Gasoline Tank	N/A	75 gal	N/A	N/A	0 tpy
N/A	Xylene Tank	N/A	10000 gal	N/A	N/A	0 tpy
N/A	Process Flare	Propane	0.0363 MMBtu/day	40 CFR 98 Tables C-1 & 2	63.12 kg/MMBtu	1 tpy
Total						57,809 tpy

Conversions:

Diesel Fuel Heat Content:	137,000 Btu/gal	EU ID 44 Heat Rate:	730 scf/hr
Liquid Fuel Density:	7 lb/gal	EU ID 45 Heat Rate:	260 scf/hr
Gasoline Heat Content:	125,000 Btu/gal	Microturbine Heat Rate:	12,200 Btu/kW-hr
Fuel Gas Heat Content:	1,005 Btu/scf	Propane Heat Value:	90,500 Btu/gal
Gas-Fired Engine Heat Rate:	8,000 Btu/hp-hr	Propane Density:	4.24 lb/gal
Waste Heat Content:	9.95 MMBtu/ton		

**Table D-10. HAP Emissions - 2SLB Gas-Fired Engines
Hilcorp Alaska, LLC - Swanson River Field**

CAS No.	Chemical Name	Emission Factor ¹	Limited Potential Emissions ²		Unlimited Potential Emissions ²		Estimated Actual Emissions ²						
			EU ID 8, 9, 10, 11, each	EU ID 12, 13, 14, combined	EU ID 8, 9, 10, 11, 12, each	EU ID 13, 14, each	EU ID 8	EU ID 9	EU ID 10	EU ID 11	EU ID 12	EU ID 13	EU ID 14
75070	Acetaldehyde (EU IDs 8-12)	3.00E-03 lb/hr	1.3E-02 tpy	0 tpy	1.3E-02 tpy	0 tpy	5.5E-03 tpy	8.8E-03 tpy	9.4E-03 tpy	7.6E-03 tpy	1.6E-03 tpy	0 tpy	0 tpy
75070	Acetaldehyde (EU IDs 13-14)	3.20E-03 lb/hr	0 tpy	2.8E-02 tpy	0 tpy	1.4E-02 tpy	0 tpy	0 tpy	0 tpy	0 tpy	0 tpy	7.3E-03 tpy	4.6E-03 tpy
107028	Acrolein (EU IDs 8-12)	4.00E-03 lb/hr	1.8E-02 tpy	0 tpy	1.8E-02 tpy	0 tpy	7.3E-03 tpy	1.2E-02 tpy	1.3E-02 tpy	1.0E-02 tpy	2.2E-03 tpy	0 tpy	0 tpy
107028	Acrolein (EU IDs 13-14)	4.20E-03 lb/hr	0 tpy	3.7E-02 tpy	0 tpy	1.8E-02 tpy	0 tpy	0 tpy	0 tpy	0 tpy	0 tpy	9.6E-03 tpy	6.1E-03 tpy
71432	Benzene	1.94E-03 lb/MMBtu	0.26 tpy	0.54 tpy	0.26 tpy	0.27 tpy	0.11 tpy	0.17 tpy	0.18 tpy	0.15 tpy	3.2E-02 tpy	0.14 tpy	9.0E-02 tpy
92524	Biphenyl	3.95E-06 lb/MMBtu	5.2E-04 tpy	1.1E-03 tpy	5.2E-04 tpy	5.5E-04 tpy	2.2E-04 tpy	3.5E-04 tpy	3.7E-04 tpy	3.0E-04 tpy	6.5E-05 tpy	2.9E-04 tpy	1.8E-04 tpy
106990	1,3-Butadiene	8.20E-04 lb/MMBtu	0.11 tpy	0.23 tpy	0.11 tpy	0.11 tpy	4.5E-02 tpy	7.3E-02 tpy	7.8E-02 tpy	6.3E-02 tpy	1.3E-02 tpy	6.0E-02 tpy	3.8E-02 tpy
56235	Carbon Tetrachloride	6.07E-05 lb/MMBtu	8.0E-03 tpy	1.7E-02 tpy	8.0E-03 tpy	8.5E-03 tpy	3.3E-03 tpy	5.4E-03 tpy	5.7E-03 tpy	4.6E-03 tpy	9.9E-04 tpy	4.4E-03 tpy	2.8E-03 tpy
108907	Chlorobenzene	4.44E-05 lb/MMBtu	5.9E-03 tpy	1.2E-02 tpy	5.9E-03 tpy	6.2E-03 tpy	2.4E-03 tpy	4.0E-03 tpy	4.2E-03 tpy	3.4E-03 tpy	7.3E-04 tpy	3.2E-03 tpy	2.1E-03 tpy
67663	Chloroform	4.71E-05 lb/MMBtu	6.2E-03 tpy	1.3E-02 tpy	6.2E-03 tpy	6.6E-03 tpy	2.6E-03 tpy	4.2E-03 tpy	4.5E-03 tpy	3.6E-03 tpy	7.7E-04 tpy	3.4E-03 tpy	2.2E-03 tpy
75343	1,1-Dichloroethane	3.91E-05 lb/MMBtu	5.2E-03 tpy	1.1E-02 tpy	5.2E-03 tpy	5.5E-03 tpy	2.1E-03 tpy	3.5E-03 tpy	3.7E-03 tpy	3.0E-03 tpy	6.4E-04 tpy	2.8E-03 tpy	1.8E-03 tpy
107062	1,2-Dichloroethane	4.22E-05 lb/MMBtu	5.6E-03 tpy	1.2E-02 tpy	5.6E-03 tpy	5.9E-03 tpy	2.3E-03 tpy	3.8E-03 tpy	4.0E-03 tpy	3.2E-03 tpy	6.9E-04 tpy	3.1E-03 tpy	2.0E-03 tpy
78875	1,2-Dichloropropane	4.46E-05 lb/MMBtu	5.9E-03 tpy	1.3E-02 tpy	5.9E-03 tpy	6.3E-03 tpy	2.4E-03 tpy	4.0E-03 tpy	4.2E-03 tpy	3.4E-03 tpy	7.3E-04 tpy	3.2E-03 tpy	2.1E-03 tpy
542756	1,3-Dichloropropene	4.38E-05 lb/MMBtu	5.8E-03 tpy	1.2E-02 tpy	5.8E-03 tpy	6.1E-03 tpy	2.4E-03 tpy	3.9E-03 tpy	4.1E-03 tpy	3.3E-03 tpy	7.2E-04 tpy	3.2E-03 tpy	2.0E-03 tpy
100414	Ethyl benzene	1.08E-04 lb/MMBtu	1.4E-02 tpy	3.0E-02 tpy	1.4E-02 tpy	1.5E-02 tpy	5.9E-03 tpy	9.6E-03 tpy	1.0E-02 tpy	8.2E-03 tpy	1.8E-03 tpy	7.9E-03 tpy	5.0E-03 tpy
106934	Ethylene dibromide	7.34E-05 lb/MMBtu	9.7E-03 tpy	2.1E-02 tpy	9.7E-03 tpy	1.0E-02 tpy	4.0E-03 tpy	6.5E-03 tpy	7.0E-03 tpy	5.6E-03 tpy	1.2E-03 tpy	5.3E-03 tpy	3.4E-03 tpy
5000	Formaldehyde (EU IDs 8-12)	6.00E-03 lb/hr	2.6E-02 tpy	0 tpy	2.6E-02 tpy	0 tpy	1.1E-02 tpy	1.8E-02 tpy	1.9E-02 tpy	1.5E-02 tpy	3.3E-03 tpy	0 tpy	0 tpy
5000	Formaldehyde (EU IDs 13-14)	6.40E-03 lb/hr	0 tpy	5.6E-02 tpy	0 tpy	2.8E-02 tpy	0 tpy	0 tpy	0 tpy	0 tpy	0 tpy	1.5E-02 tpy	9.3E-03 tpy
110543	N-Hexane	4.45E-04 lb/MMBtu	5.9E-02 tpy	0.12 tpy	5.9E-02 tpy	6.2E-02 tpy	2.4E-02 tpy	4.0E-02 tpy	4.2E-02 tpy	3.4E-02 tpy	7.3E-03 tpy	3.2E-02 tpy	2.1E-02 tpy
67561	Methanol	2.48E-03 lb/MMBtu	0.33 tpy	0.70 tpy	0.33 tpy	0.35 tpy	0.14 tpy	0.22 tpy	0.23 tpy	0.19 tpy	4.1E-02 tpy	0.18 tpy	0.11 tpy
75092	Methylene chloride	1.47E-04 lb/MMBtu	1.9E-02 tpy	4.1E-02 tpy	1.9E-02 tpy	2.1E-02 tpy	8.1E-03 tpy	1.3E-02 tpy	1.4E-02 tpy	1.1E-02 tpy	2.4E-03 tpy	1.1E-02 tpy	6.8E-03 tpy
108952	Phenol	4.21E-05 lb/MMBtu	5.6E-03 tpy	1.2E-02 tpy	5.6E-03 tpy	5.9E-03 tpy	2.3E-03 tpy	3.8E-03 tpy	4.0E-03 tpy	3.2E-03 tpy	6.9E-04 tpy	3.1E-03 tpy	2.0E-03 tpy
N/A	Polycyclic Organic Matter	1.34E-04 lb/MMBtu	1.8E-02 tpy	3.8E-02 tpy	1.8E-02 tpy	1.9E-02 tpy	7.4E-03 tpy	1.2E-02 tpy	1.3E-02 tpy	1.0E-02 tpy	2.2E-03 tpy	9.8E-03 tpy	6.2E-03 tpy
91203	Naphthalene	9.63E-05 lb/MMBtu	1.3E-02 tpy	2.7E-02 tpy	1.3E-02 tpy	1.3E-02 tpy	5.3E-03 tpy	8.6E-03 tpy	9.1E-03 tpy	7.4E-03 tpy	1.6E-03 tpy	7.0E-03 tpy	4.5E-03 tpy
100425	Styrene	5.48E-05 lb/MMBtu	7.3E-03 tpy	1.5E-02 tpy	7.3E-03 tpy	7.7E-03 tpy	3.0E-03 tpy	4.9E-03 tpy	5.2E-03 tpy	4.2E-03 tpy	9.0E-04 tpy	4.0E-03 tpy	2.5E-03 tpy
79345	1,1,2,2-Tetrachloroethane	6.63E-05 lb/MMBtu	8.8E-03 tpy	1.9E-02 tpy	8.8E-03 tpy	9.3E-03 tpy	3.6E-03 tpy	5.9E-03 tpy	6.3E-03 tpy	5.1E-03 tpy	1.1E-03 tpy	4.8E-03 tpy	3.1E-03 tpy
108883	Toluene	9.63E-04 lb/MMBtu	0.13 tpy	0.27 tpy	0.13 tpy	0.13 tpy	5.3E-02 tpy	8.6E-02 tpy	9.1E-02 tpy	7.4E-02 tpy	1.6E-02 tpy	7.0E-02 tpy	4.5E-02 tpy
79005	1,1,2-Trichloroethane	5.27E-05 lb/MMBtu	7.0E-03 tpy	1.5E-02 tpy	7.0E-03 tpy	7.4E-03 tpy	2.9E-03 tpy	4.7E-03 tpy	5.0E-03 tpy	4.0E-03 tpy	8.6E-04 tpy	3.8E-03 tpy	2.4E-03 tpy
540841	2,2,4-Trimethylpentane	8.46E-04 lb/MMBtu	0.11 tpy	0.24 tpy	0.11 tpy	0.12 tpy	4.6E-02 tpy	7.5E-02 tpy	8.0E-02 tpy	6.5E-02 tpy	1.4E-02 tpy	6.2E-02 tpy	3.9E-02 tpy
75014	Vinyl chloride	2.47E-05 lb/MMBtu	3.3E-03 tpy	6.9E-03 tpy	3.3E-03 tpy	3.5E-03 tpy	1.4E-03 tpy	2.2E-03 tpy	2.3E-03 tpy	1.9E-03 tpy	4.0E-04 tpy	1.8E-03 tpy	1.1E-03 tpy
1330207	Xylenes	2.68E-04 lb/MMBtu	3.5E-02 tpy	7.5E-02 tpy	3.5E-02 tpy	3.8E-02 tpy	1.5E-02 tpy	2.4E-02 tpy	2.5E-02 tpy	2.0E-02 tpy	4.4E-03 tpy	2.0E-02 tpy	1.2E-02 tpy
Total			1.23 tpy	2.61 tpy	1.23 tpy	1.31 tpy	0.51 tpy	0.83 tpy	0.88 tpy	0.71 tpy	0.15 tpy	0.68 tpy	0.43 tpy

Notes:

¹ Reference: AP-42, Table 3.2-1; Source Test for Acetaldehyde, Acrolein, and Formaldehyde.

² Total heat consumption based on operation as noted below:

EU ID	Rating/Size	Limited Operations		Unlimited Operations		Estimated Actual Operations	
8	3,777 hp	264,692	MMBtu/yr @ 8,760 hr/yr	264,692.2	MMBtu/yr @ 8,760 hr/yr	109,806.5	MMBtu/yr @ 3,634 hr/yr
9	3,777 hp	264,692	MMBtu/yr @ 8,760 hr/yr	264,692.2	MMBtu/yr @ 8,760 hr/yr	178,272.9	MMBtu/yr @ 5,900 hr/yr
10	3,777 hp	264,692	MMBtu/yr @ 8,760 hr/yr	264,692.2	MMBtu/yr @ 8,760 hr/yr	189,379.1	MMBtu/yr @ 6,268 hr/yr
11	3,777 hp	264,692	MMBtu/yr @ 8,760 hr/yr	264,692.2	MMBtu/yr @ 8,760 hr/yr	152,673.9	MMBtu/yr @ 5,053 hr/yr
12	3,777 hp			264,692.2	MMBtu/yr @ 8,760 hr/yr	32,781.3	MMBtu/yr @ 1,085 hr/yr
13	4,000 hp	560,640	MMBtu/yr @ 17,520 hr/yr	280,320.0	MMBtu/yr @ 8,760 hr/yr	145,696.0	MMBtu/yr @ 4,553 hr/yr
14	4,000 hp			280,320.0	MMBtu/yr @ 8,760 hr/yr	92,707.2	MMBtu/yr @ 2,897 hr/yr

Conversions:

Gas-Fired Engine Heat Rate: 8,000 Btu/hp-hr

**Table D-11. HAP Emissions - 4SRB Gas-Fired Engines
Hilcorp Alaska, LLC - Swanson River Field**

CAS No.	Chemical Name	Emission Factor ¹	Limited/Unlimited Potential Emissions ²			Estimated Actual Emissions ²	
			EU ID 43	EU ID 44	EU ID 45	EU ID 43	EU ID 44, 45, each
75070	Acetaldehyde	2.79E-03 lb/MMBtu	2.2E-04 tpy	5.1E-04 tpy	1.8E-04 tpy	1.1E-05 tpy	0 tpy
107028	Acrolein	2.63E-03 lb/MMBtu	2.1E-04 tpy	4.8E-04 tpy	1.7E-04 tpy	1.0E-05 tpy	0 tpy
71432	Benzene	1.58E-03 lb/MMBtu	1.3E-04 tpy	2.9E-04 tpy	1.0E-04 tpy	6.2E-06 tpy	0 tpy
106990	1,3-Butadiene	6.63E-04 lb/MMBtu	5.3E-05 tpy	1.2E-04 tpy	4.3E-05 tpy	2.6E-06 tpy	0 tpy
56235	Carbon Tetrachloride	1.77E-05 lb/MMBtu	1.4E-06 tpy	3.2E-06 tpy	1.2E-06 tpy	7.0E-08 tpy	0 tpy
108907	Chlorobenzene	1.29E-05 lb/MMBtu	1.0E-06 tpy	2.4E-06 tpy	8.4E-07 tpy	5.1E-08 tpy	0 tpy
67663	Chloroform	1.37E-05 lb/MMBtu	1.1E-06 tpy	2.5E-06 tpy	9.0E-07 tpy	5.4E-08 tpy	0 tpy
75343	1,1-Dichloroethane	1.13E-05 lb/MMBtu	9.0E-07 tpy	2.1E-06 tpy	7.4E-07 tpy	4.5E-08 tpy	0 tpy
107062	1,2-Dichloroethane	1.13E-05 lb/MMBtu	9.0E-07 tpy	2.1E-06 tpy	7.4E-07 tpy	4.5E-08 tpy	0 tpy
78875	1,2-Dichloropropane	1.30E-05 lb/MMBtu	1.0E-06 tpy	2.4E-06 tpy	8.5E-07 tpy	5.1E-08 tpy	0 tpy
542756	1,3-Dichloropropene	1.27E-05 lb/MMBtu	1.0E-06 tpy	2.3E-06 tpy	8.3E-07 tpy	5.0E-08 tpy	0 tpy
100414	Ethylbenzene	2.48E-05 lb/MMBtu	2.0E-06 tpy	4.6E-06 tpy	1.6E-06 tpy	9.8E-08 tpy	0 tpy
106934	Ethylene dibromide	2.13E-05 lb/MMBtu	1.7E-06 tpy	3.9E-06 tpy	1.4E-06 tpy	8.4E-08 tpy	0 tpy
5000	Formaldehyde	2.05E-02 lb/MMBtu	1.6E-03 tpy	3.8E-03 tpy	1.3E-03 tpy	8.1E-05 tpy	0 tpy
67561	Methanol	3.06E-03 lb/MMBtu	2.4E-04 tpy	5.6E-04 tpy	2.0E-04 tpy	1.2E-05 tpy	0 tpy
75092	Methylene Chloride	4.12E-05 lb/MMBtu	3.3E-06 tpy	7.6E-06 tpy	2.7E-06 tpy	1.6E-07 tpy	0 tpy
N/A	Polycyclic Organic Matter	1.41E-04 lb/MMBtu	1.1E-05 tpy	2.6E-05 tpy	9.2E-06 tpy	5.6E-07 tpy	0 tpy
91203	Naphthalene	9.71E-05 lb/MMBtu	7.8E-06 tpy	1.8E-05 tpy	6.3E-06 tpy	3.8E-07 tpy	0 tpy
100425	Styrene	1.19E-05 lb/MMBtu	9.5E-07 tpy	2.2E-06 tpy	7.8E-07 tpy	4.7E-08 tpy	0 tpy
79345	1,1,2,2-Tetrachloroethane	2.53E-05 lb/MMBtu	2.0E-06 tpy	4.6E-06 tpy	1.7E-06 tpy	1.0E-07 tpy	0 tpy
108883	Toluene	5.58E-04 lb/MMBtu	4.5E-05 tpy	1.0E-04 tpy	3.6E-05 tpy	2.2E-06 tpy	0 tpy
79005	1,1,2-Trichloroethane	1.53E-05 lb/MMBtu	1.2E-06 tpy	2.8E-06 tpy	1.0E-06 tpy	6.0E-08 tpy	0 tpy
75014	Vinyl chloride	7.18E-06 lb/MMBtu	5.7E-07 tpy	1.3E-06 tpy	4.7E-07 tpy	2.8E-08 tpy	0 tpy
1330207	Xylenes	1.95E-04 lb/MMBtu	1.6E-05 tpy	3.6E-05 tpy	1.3E-05 tpy	7.7E-07 tpy	0 tpy
Total			2.6E-03 tpy	6.0E-03 tpy	2.1E-03 tpy	1.3E-04 tpy	0 tpy

Notes:

¹ Reference: AP-42, Table 3.2-3.

² Total heat consumption based on operation as noted below:

EU ID	Rating/Size	Limited/Unlimited Operations		Estimated Actual Operations	
43	40 hp	160.0 MMBtu/yr @	500 hr/yr	7.9 MMBtu/yr @	24.7 hr/yr
44	36 kW-e	367.0 MMBtu/yr @	500 hr/yr	0.0 MMBtu/yr @	0.0 hr/yr
45	20 kW-e	130.7 MMBtu/yr @	500 hr/yr	0.0 MMBtu/yr @	0.0 hr/yr

Conversions:

Gas-Fired Engine Heat Rate:	8,000 Btu/hp-hr	EU ID 44 Heat Rate:	730 scf/hr
Fuel Gas Heat Content:	1,005 Btu/scf	EU ID 45 Heat Rate:	260 scf/hr

**Table D-12. HAP Emissions - Gasoline-Fired Engines
Hilcorp Alaska, LLC - Swanson River Field**

CAS No.	Chemical Name	Emission Factor ¹	Limited/Unlimited Potential Emissions ²		Estimated Actual Emissions ²	
			EU ID 40	EU ID 41	EU ID 40	EU ID 41
75070	Acetaldehyde	7.67E-04 lb/MMBtu	3.9E-05 tpy	3.9E-05 tpy	1.8E-06 tpy	1.8E-06 tpy
107028	Acrolein	9.25E-05 lb/MMBtu	4.7E-06 tpy	4.7E-06 tpy	2.1E-07 tpy	2.1E-07 tpy
71432	Benzene	9.33E-04 lb/MMBtu	4.8E-05 tpy	4.8E-05 tpy	2.2E-06 tpy	2.2E-06 tpy
106990	1,3-Butadiene	3.91E-05 lb/MMBtu	2.0E-06 tpy	2.0E-06 tpy	9.1E-08 tpy	9.1E-08 tpy
5000	Formaldehyde	1.18E-03 lb/MMBtu	6.0E-05 tpy	6.0E-05 tpy	2.7E-06 tpy	2.7E-06 tpy
N/A	Polycyclic Organic Matter	1.68E-04 lb/MMBtu	8.6E-06 tpy	8.6E-06 tpy	3.9E-07 tpy	3.9E-07 tpy
108883	Toluene	4.09E-04 lb/MMBtu	2.1E-05 tpy	2.1E-05 tpy	9.5E-07 tpy	9.5E-07 tpy
1330207	Xylenes	2.85E-04 lb/MMBtu	1.5E-05 tpy	1.5E-05 tpy	6.6E-07 tpy	6.6E-07 tpy
Total			2.0E-04 tpy	2.0E-04 tpy	9.0E-06 tpy	9.0E-06 tpy

Notes:

¹ Reference: AP-42, Tables 3.3-2.

² Total heat consumption based on operation as noted below:

EU ID	Rating/Size	Limited/Unlimited Operations		Estimated Actual Operations	
40	19 kW	101.9 MMBtu/yr @	500 hr/yr	4.6 MMBtu/yr @	22.8 hr/yr
41	19 kW	101.9 MMBtu/yr @	500 hr/yr	4.6 MMBtu/yr @	22.9 hr/yr

Conversions:

Gasoline Heat Content:	125,000 Btu/gal
Gas-Fired Engine Heat Rate:	8,000 Btu/hp-hr

**Table D-13. HAP Emissions - Gas-Fired Turbines
Hilcorp Alaska, LLC - Swanson River Field**

CAS No.	Chemical Name	Emission Factor ¹	Limited/Unlimited/Estimated Actual Emissions ²
			Microturbines, total
75070	Acetaldehyde	4.0E-05 lb/MMBtu	2.8E-04 tpy
107028	Acrolein	6.4E-06 lb/MMBtu	4.4E-05 tpy
71432	Benzene	1.2E-05 lb/MMBtu	8.3E-05 tpy
106990	1,3-Butadiene	4.3E-07 lb/MMBtu	3.0E-06 tpy
100414	Ethyl benzene	3.2E-05 lb/MMBtu	2.2E-04 tpy
5000	Formaldehyde	7.1E-04 lb/MMBtu	4.9E-03 tpy
N/A	Polycyclic Organic Matter	2.2E-06 lb/MMBtu	1.5E-05 tpy
91203	Naphthalene	1.3E-06 lb/MMBtu	9.0E-06 tpy
75569	Propylene oxide	2.9E-05 lb/MMBtu	2.0E-04 tpy
108883	Toluene	1.3E-04 lb/MMBtu	9.0E-04 tpy
1330207	Xylenes	6.4E-05 lb/MMBtu	4.4E-04 tpy
Total			7.1E-03 tpy

Notes:

¹ Reference: AP-42, Table 3.1-3.

² Total heat consumption based on operation as noted below:

	<u>EU ID</u>	<u>Rating/Size</u>	<u>Limited/Unlimited/Estimated Actual Operations</u>	
	Microturbines (x2)	130 kW, total	13,893 MMBtu/yr @	8,760 hr/yr
Conversions:				
	Microturbine Heat Rate:	12,200 Btu/kW-hr		

**Table D-14. HAP Emissions - Gas-Fired Boilers and Heaters
Hilcorp Alaska, LLC - Swanson River Field**

CAS No.	Hazardous Pollutant	Emission Factor ¹	Limited/Unlimited Potential Emissions ²				Estimated Actual Emissions ²			
			EU ID 1	EU ID 2	EU ID 46	Insignificant EUs, total	EU ID 1	EU ID 2	EU ID 46	Insignificant EUs, total
71432	Benzene	2.1E-03 lb/MMscf	5.7E-05 tpy	7.3E-06 tpy	4.6E-05 tpy	9.9E-04 tpy	7.0E-07 tpy	8.6E-08 tpy	2.3E-05 tpy	9.9E-04 tpy
25321226	Dichlorobenzene	1.2E-03 lb/MMscf	3.3E-05 tpy	4.2E-06 tpy	2.6E-05 tpy	5.6E-04 tpy	4.0E-07 tpy	4.9E-08 tpy	1.3E-05 tpy	5.6E-04 tpy
5000	Formaldehyde	7.5E-02 lb/MMscf	2.1E-03 tpy	2.6E-04 tpy	1.6E-03 tpy	3.5E-02 tpy	2.5E-05 tpy	3.1E-06 tpy	8.2E-04 tpy	3.5E-02 tpy
110543	N-Hexane	1.8E+00 lb/MMscf	4.9E-02 tpy	6.3E-03 tpy	3.9E-02 tpy	0.85 tpy	6.0E-04 tpy	7.4E-05 tpy	2.0E-02 tpy	0.85 tpy
N/A	Polycyclic Organic Matter	8.82E-05 lb/MMscf	2.4E-06 tpy	3.1E-07 tpy	1.9E-06 tpy	4.1E-05 tpy	2.9E-08 tpy	3.6E-09 tpy	9.6E-07 tpy	4.1E-05 tpy
91203	Naphthalene	6.1E-04 lb/MMscf	1.7E-05 tpy	2.1E-06 tpy	1.3E-05 tpy	2.9E-04 tpy	2.0E-07 tpy	2.5E-08 tpy	6.6E-06 tpy	2.9E-04 tpy
108883	Toluene	3.4E-03 lb/MMscf	9.3E-05 tpy	1.2E-05 tpy	7.4E-05 tpy	1.6E-03 tpy	1.1E-06 tpy	1.4E-07 tpy	3.7E-05 tpy	1.6E-03 tpy
N/A	Arsenic Compounds	2.0E-04 lb/MMscf	5.5E-06 tpy	7.0E-07 tpy	4.4E-06 tpy	9.4E-05 tpy	6.7E-08 tpy	8.2E-09 tpy	2.2E-06 tpy	9.4E-05 tpy
N/A	Beryllium Compounds	1.2E-05 lb/MMscf	3.3E-07 tpy	4.2E-08 tpy	2.6E-07 tpy	5.6E-06 tpy	4.0E-09 tpy	4.9E-10 tpy	1.3E-07 tpy	5.6E-06 tpy
N/A	Cadmium Compounds	1.1E-03 lb/MMscf	3.0E-05 tpy	3.8E-06 tpy	2.4E-05 tpy	5.2E-04 tpy	3.7E-07 tpy	4.5E-08 tpy	1.2E-05 tpy	5.2E-04 tpy
N/A	Chromium Compounds	1.4E-03 lb/MMscf	3.8E-05 tpy	4.9E-06 tpy	3.0E-05 tpy	6.6E-04 tpy	4.7E-07 tpy	5.8E-08 tpy	1.5E-05 tpy	6.6E-04 tpy
N/A	Cobalt Compounds	8.4E-05 lb/MMscf	2.3E-06 tpy	2.9E-07 tpy	1.8E-06 tpy	3.9E-05 tpy	2.8E-08 tpy	3.5E-09 tpy	9.1E-07 tpy	3.9E-05 tpy
N/A	Lead Compounds	5.0E-04 lb/MMscf	1.4E-05 tpy	1.7E-06 tpy	1.1E-05 tpy	2.4E-04 tpy	1.7E-07 tpy	2.1E-08 tpy	5.4E-06 tpy	2.4E-04 tpy
N/A	Manganese Compounds	3.8E-04 lb/MMscf	1.0E-05 tpy	1.3E-06 tpy	8.3E-06 tpy	1.8E-04 tpy	1.3E-07 tpy	1.6E-08 tpy	4.1E-06 tpy	1.8E-04 tpy
N/A	Mercury Compounds	2.6E-04 lb/MMscf	7.1E-06 tpy	9.1E-07 tpy	5.7E-06 tpy	1.2E-04 tpy	8.7E-08 tpy	1.1E-08 tpy	2.8E-06 tpy	1.2E-04 tpy
N/A	Nickel Compounds	2.1E-03 lb/MMscf	5.7E-05 tpy	7.3E-06 tpy	4.6E-05 tpy	9.9E-04 tpy	7.0E-07 tpy	8.6E-08 tpy	2.3E-05 tpy	9.9E-04 tpy
N/A	Selenium Compounds	2.4E-05 lb/MMscf	6.6E-07 tpy	8.4E-08 tpy	5.2E-07 tpy	1.1E-05 tpy	8.0E-09 tpy	9.9E-10 tpy	2.6E-07 tpy	1.1E-05 tpy
Total			5.2E-02 tpy	6.6E-03 tpy	4.1E-02 tpy	0.89 tpy	6.3E-04 tpy	7.8E-05 tpy	2.1E-02 tpy	0.89 tpy

Notes:

¹ Reference: AP-42, Tables 1.4-2, 1.4-3, & 1.4-4.

² Total fuel consumption based on operation as noted below:

EU ID	Rating/Size	Limited/Unlimited Operations		Estimated Actual Operations	
1	6.275 MMBtu/hr	54.7 MMscf/yr @	8,760 hr/yr	0.7 MMscf/yr @	107 hr/yr
2 (Burner)	0.8 MMBtu/hr	7.0 MMscf/yr @	8,760 hr/yr	0.1 MMscf/yr @	103 hr/yr
46	5 MMBtu/hr	43.6 MMscf/yr @	8,760 hr/yr	21.8 MMscf/yr @	4,380 hr/yr
Various IEUs	107.912 MMBtu/hr, total	940.2 MMscf/yr @	8,760 hr/yr	940.2 MMscf/yr @	8,760 hr/yr

Conversions:

Fuel Gas Heat Content: 1,005 Btu/scf

**Table D-15. HAP Emissions - Diesel-Fired Boilers and Heaters
Hilcorp Alaska, LLC - Swanson River Field**

CAS No.	Chemical Name	Emission Factor ¹	Limited/Unlimited Potential Emissions ²			Estimated Actual Operations ²		
			Drilling Boilers, each	Drilling Heater	Insignificant EUs, total	Drilling Boilers, each	Drilling Heater	Insignificant EUs, total
71432	Benzene	2.14E-04 lb/kgal	4.6E-05 tpy	2.9E-05 tpy	1.6E-05 tpy	7.6E-06 tpy	4.8E-06 tpy	1.6E-05 tpy
100414	Ethylbenzene	6.36E-05 lb/kgal	1.4E-05 tpy	8.5E-06 tpy	4.7E-06 tpy	2.3E-06 tpy	1.4E-06 tpy	4.7E-06 tpy
5000	Formaldehyde	3.30E-02 lb/kgal	7.1E-03 tpy	4.4E-03 tpy	2.4E-03 tpy	1.2E-03 tpy	7.4E-04 tpy	2.4E-03 tpy
N/A	Polycyclic Organic Matter	3.30E-03 lb/kgal	7.1E-04 tpy	4.4E-04 tpy	2.4E-04 tpy	1.2E-04 tpy	7.4E-05 tpy	2.4E-04 tpy
91203	Naphthalene	1.13E-03 lb/kgal	2.4E-04 tpy	1.5E-04 tpy	8.3E-05 tpy	4.0E-05 tpy	2.5E-05 tpy	8.3E-05 tpy
108883	Toluene	6.20E-03 lb/kgal	1.3E-03 tpy	8.3E-04 tpy	4.6E-04 tpy	2.2E-04 tpy	1.4E-04 tpy	4.6E-04 tpy
71556	1,1,1-Trichloroethane	2.36E-04 lb/kgal	5.0E-05 tpy	3.2E-05 tpy	1.7E-05 tpy	8.4E-06 tpy	5.3E-06 tpy	1.7E-05 tpy
1330207	Xylenes (isomers and mixture)	1.09E-04 lb/kgal	2.3E-05 tpy	1.5E-05 tpy	8.0E-06 tpy	3.9E-06 tpy	2.4E-06 tpy	8.0E-06 tpy
N/A	Arsenic Compounds	4 lb/10 ¹² Btu	1.2E-04 tpy	7.4E-05 tpy	4.0E-05 tpy	2.0E-05 tpy	1.2E-05 tpy	4.0E-05 tpy
N/A	Beryllium Compounds	3 lb/10 ¹² Btu	8.8E-05 tpy	5.5E-05 tpy	3.0E-05 tpy	1.5E-05 tpy	9.2E-06 tpy	3.0E-05 tpy
N/A	Cadmium Compounds	3 lb/10 ¹² Btu	8.8E-05 tpy	5.5E-05 tpy	3.0E-05 tpy	1.5E-05 tpy	9.2E-06 tpy	3.0E-05 tpy
N/A	Chromium Compounds	3 lb/10 ¹² Btu	8.8E-05 tpy	5.5E-05 tpy	3.0E-05 tpy	1.5E-05 tpy	9.2E-06 tpy	3.0E-05 tpy
N/A	Lead Compounds	9 lb/10 ¹² Btu	2.6E-04 tpy	1.7E-04 tpy	9.1E-05 tpy	4.4E-05 tpy	2.8E-05 tpy	9.1E-05 tpy
N/A	Manganese Compounds	6 lb/10 ¹² Btu	1.8E-04 tpy	1.1E-04 tpy	6.0E-05 tpy	2.9E-05 tpy	1.8E-05 tpy	6.0E-05 tpy
N/A	Mercury Compounds	3 lb/10 ¹² Btu	8.8E-05 tpy	5.5E-05 tpy	3.0E-05 tpy	1.5E-05 tpy	9.2E-06 tpy	3.0E-05 tpy
N/A	Nickel Compounds	3 lb/10 ¹² Btu	8.8E-05 tpy	5.5E-05 tpy	3.0E-05 tpy	1.5E-05 tpy	9.2E-06 tpy	3.0E-05 tpy
N/A	Selenium Compounds	15 lb/10 ¹² Btu	4.4E-04 tpy	2.8E-04 tpy	1.5E-04 tpy	7.3E-05 tpy	4.6E-05 tpy	1.5E-04 tpy
Total			1.1E-02 tpy	6.8E-03 tpy	3.7E-03 tpy	1.8E-03 tpy	1.1E-03 tpy	3.7E-03 tpy

Notes:

¹ Reference: AP-42, Tables 1.3-8, 1.3-9, & 1.3-10.

² Total fuel consumption based on operation as noted below:

<u>EU ID</u>	<u>Rating/Size</u>	<u>Limited/Unlimited Operations</u>		<u>Estimated Actual Operations</u>	
Drilling Boiler	6.69 MMBtu/hr	428 kgal/yr @	8,760 hr/yr	71 kgal/yr @	1,464 hr/yr
Drilling Boiler	6.69 MMBtu/hr	428 kgal/yr @	8,760 hr/yr	71 kgal/yr @	1,464 hr/yr
Drilling Heater	4.2 MMBtu/hr	269 kgal/yr @	8,760 hr/yr	45 kgal/yr @	1,464 hr/yr
Various IEUs	2.3 MMBtu/hr	147 kgal/yr @	8,760 hr/yr	147 kgal/yr @	8,760 hr/yr

Conversions:

Diesel Fuel Heat Content: 137,000 Btu/gal

**Table D-16. HAP Emissions - Gas-Fired Flares
Hilcorp Alaska, LLC - Swanson River Field**

CAS No.	Chemical Name	Emission Factor ¹	Limited Potential Emissions ²			Unlimited Potential Emissions ²			Estimated Actual Emissions ²		
			EU IDs 24-33, total	Drill Test Flare	Process Flare	EU IDs 24-33, total	Drill Test Flare	Process Flare	EU IDs 24-33, total	Drill Test Flare	Process Flare
75070	Acetaldehyde	0.043 lb/MMscf	1.1E-03 tpy	6.5E-03 tpy	1.1E-07 tpy	2.47 tpy	6.5E-03 tpy	1.1E-07 tpy	6.5E-04 tpy	0 tpy	1.1E-07 tpy
107028	Acrolein	0.010 lb/MMscf	2.5E-04 tpy	1.5E-03 tpy	2.6E-08 tpy	0.58 tpy	1.5E-03 tpy	2.6E-08 tpy	1.5E-04 tpy	0 tpy	2.6E-08 tpy
71432	Benzene	0.159 lb/MMscf	4.0E-03 tpy	2.4E-02 tpy	4.2E-07 tpy	9.14 tpy	2.4E-02 tpy	4.2E-07 tpy	2.4E-03 tpy	0 tpy	4.2E-07 tpy
100414	Ethylbenzene	1.444 lb/MMscf	3.6E-02 tpy	2.2E-01 tpy	3.8E-06 tpy	83.04 tpy	2.2E-01 tpy	3.8E-06 tpy	2.2E-02 tpy	0 tpy	3.8E-06 tpy
5000	Formaldehyde	1.169 lb/MMscf	2.9E-02 tpy	1.8E-01 tpy	3.1E-06 tpy	67.22 tpy	1.8E-01 tpy	3.1E-06 tpy	1.8E-02 tpy	0 tpy	3.1E-06 tpy
110543	N-Hexane	0.029 lb/MMscf	7.3E-04 tpy	4.4E-03 tpy	7.6E-08 tpy	1.67 tpy	4.4E-03 tpy	7.6E-08 tpy	4.4E-04 tpy	0 tpy	7.6E-08 tpy
N/A	Polycyclic Organic Matter	0.014 lb/MMscf	3.5E-04 tpy	2.1E-03 tpy	3.7E-08 tpy	0.81 tpy	2.1E-03 tpy	3.7E-08 tpy	2.1E-04 tpy	0 tpy	3.7E-08 tpy
108883	Toluene	0.058 lb/MMscf	1.5E-03 tpy	8.7E-03 tpy	1.5E-07 tpy	3.34 tpy	8.7E-03 tpy	1.5E-07 tpy	8.8E-04 tpy	0 tpy	1.5E-07 tpy
1330207	Xylenes	0.029 lb/MMscf	7.3E-04 tpy	4.4E-03 tpy	7.6E-08 tpy	1.67 tpy	4.4E-03 tpy	7.6E-08 tpy	4.4E-04 tpy	0 tpy	7.6E-08 tpy
Total			7.4E-02 tpy	0.44 tpy	7.8E-06 tpy	169.93 tpy	0.44 tpy	7.8E-06 tpy	4.5E-02 tpy	0 tpy	7.8E-06 tpy

Notes:

¹ Reference: VCAPCD.

² Total fuel consumption based on operation as noted below:

EU ID	Rating/Size	Limited Operations	Estimated Actual Operations
24/25	0.016 MMscf/hr		
27	0.345 MMscf/hr		
28	0.605 MMscf/hr		
29	3.744 MMscf/hr		
30	3.903 MMscf/hr	50 MMscf/yr	30.4 MMscf/yr
31	0.126 MMscf/hr		
32	2.305 MMscf/hr		
33	2.085 MMscf/hr		
Drilling Test Flare	300 MMscf/yr	300 MMscf/yr	0 MMscf/yr
Process Flare	0.0363 MMBtu/day	0.005 MMscf/yr	0.01 MMscf/yr
		365 day/yr	365 day/yr

Conversions:

Fuel Gas Heat Content:	1,005 Btu/scf
Propane Heat Rate:	2,516 Btu/scf

**Table D-17. HAP Emissions - Waste Incinerator
Hilcorp Alaska, LLC - Swanson River Field**

CAS No.	Hazardous Pollutant	Emission Factor ¹	Limited Potential Emissions ²	Unlimited Potential Emissions ²	Estimated Actual Emissions ²
			EU ID 2	EU ID 2	EU ID 2
N/A	Arsenic Compounds	4.37E-03 lb/ton	3.3E-04 tpy	1.4E-03 tpy	1.6E-05 tpy
N/A	Cadmium Compounds	1.09E-02 lb/ton	8.2E-04 tpy	3.6E-03 tpy	4.1E-05 tpy
N/A	Chromium Compounds	8.97E-03 lb/ton	6.7E-04 tpy	2.9E-03 tpy	3.4E-05 tpy
7647010	Hydrochloric acid	6.40E+00 lb/ton	0.48 tpy	2.10 tpy	2.4E-02 tpy
N/A	Lead Compounds	2.13E-01 lb/ton	1.6E-02 tpy	7.0E-02 tpy	8.0E-04 tpy
N/A	Mercury Compounds	5.60E-03 lb/ton	4.2E-04 tpy	1.8E-03 tpy	2.1E-05 tpy
N/A	Nickel Compounds	7.85E-03 lb/ton	5.9E-04 tpy	2.6E-03 tpy	2.9E-05 tpy
Total			0.50 tpy	2.18 tpy	2.5E-02 tpy

Notes:

¹ Reference: AP-42, Table 2.1-2.

² Total waste consumption based on operation as noted below:

<u>EU ID</u>	<u>Rating/Size</u>	<u>Limited Operations</u>	<u>Unlimited Operations</u>	<u>Estimated Actual Operations</u>
2	150 lb/hr	150 tons/yr	657 ton/yr	7.5 ton/yr

**Table D-18. HAP Emissions - Gasoline Dispensing Facilities
Hilcorp Alaska, LLC - Swanson River Field**

CAS No.	Chemical Name	Emission Factor (wt% of total VOC) ¹	Limited/Unlimited Potential Emissions ²		Estimated Actual Emissions ²	
			EU ID 38	EU ID 39	EU ID 38	EU ID 39
71432	Benzene	0.9 wt. %	1.3E-01 tpy	1.3E-01 tpy	4.5E-02 tpy	0 tpy
100414	Ethylbenzene	0.1 wt. %	1.5E-02 tpy	1.5E-02 tpy	5.0E-03 tpy	0 tpy
110543	N-Hexane	1.6 wt. %	2.3E-01 tpy	2.3E-01 tpy	8.0E-02 tpy	0 tpy
N/A	Polycyclic Organic Matter	0.5 wt. %	7.3E-02 tpy	7.3E-02 tpy	2.5E-02 tpy	0 tpy
108883	Toluene	1.3 wt. %	1.9E-01 tpy	1.9E-01 tpy	6.5E-02 tpy	0 tpy
540841	2,2,4-Trimethylpentane	0.8 wt. %	1.2E-01 tpy	1.2E-01 tpy	4.0E-02 tpy	0 tpy
1330207	Xylenes	0.5 wt. %	7.3E-02 tpy	7.3E-02 tpy	2.5E-02 tpy	0 tpy
Total			0.83 tpy	0.83 tpy	0.28 tpy	0 tpy

Notes:

¹ Emission factors from Table 4, "Normal" column in *Developing a Consistent Methodology to Calculate VOC and HAP Evaporative Emissions for Stage I and Stage II Operations at Gasoline Service Stations for the 1999 NEI*.

² Total VOC based on operation as noted below:

<u>EU ID</u>	<u>Limited/Unlimited Operations</u>		<u>Estimated Actual Operations</u>	
38	14.5 tpy @	1,200,000 gal/yr	5.0 tpy @	34,297 gal/yr
39	14.5 tpy @	1,200,000 gal/yr	0 tpy @	0 gal/yr



Section E

Regulatory Requirements

Form E1:	Stationary Source-Wide Applicable Requirements
Form E3:	Title V Condition Change Request
Form E4:	Permit Shield Request

FORM E1
Stationary Source-Wide Applicable Requirements

Permit Number: AQ0059TVP03, Rev. 2

Stationary Source-Wide Applicable Requirements (attach additional sheets as needed):

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0059TVP03, Rev. 2 – Condition 27.1	18 AAC 50.050(a) & 50.055(a)(1)	Insignificant Emission Units: VE Standard	For insignificant sources, do not cause or allow visible emissions to reduce visibility by more than 20 percent averaged over any six consecutive minutes.	Yes.	Monitor, record, and report in accordance with Condition 27.4.
AQ0059TVP03, Rev. 2 – Condition 27.2	18 AAC 50.055(b)(1)	Insignificant Emission Units: PM Standard	For insignificant sources, do not cause or allow particulate matter to exceed 0.05 grains per cubic foot of exhaust gas averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 27.4.
AQ0059TVP03, Rev. 2 – Condition 27.3	18 AAC 50.055(c)	Insignificant Emission Units: Sulfur Standard	For insignificant sources, do not cause or allow sulfur compound emissions to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 27.4.
AQ0059TVP03 Rev. 2 – Condition 28	40 CFR 60.7(a) & 60.15(d), Subpart A	NSPS Subpart A Notification	Furnish to the Department and EPA written or electronic notification of dates of construction or reconstruction; dates of initial startup; physical or operational changes that may increase the emission rate of any applicable air pollutant; and proposed replacement of components.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 31	40 CFR 60 Subpart OOOOa	NSPS Subpart OOOOa	Comply with the provisions of Subpart OOOOa for fugitive emissions components at a well site.	Yes.	Monitor, record, and report in accordance with Conditions 31.1 through 31.6.
AQ0059TVP03, Rev. 2 – Condition 37	40 CFR 61, Subparts A and M, Appendix A	Subpart A (General Provisions) and Subpart M (Asbestos)	Comply with the requirements set forth in 40 CFR 61.145, 61.150, and 61.152 of Subpart M, and the applicable sections set forth in 40 CFR 61, Subpart A and Appendix A.	Yes.	Annual Compliance Audit.

FORM E1
Stationary Source-Wide Applicable Requirements

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0059TVP03, Rev. 2 – Condition 38	18 AAC 50.040(j) & 50.326(j)	Risk Management Plan (RMP) Requirements	Comply with the requirements of 40 CFR 68.	Yes.	Hilcorp has had the required Risk Management Plan (RMP) on file with the EPA since 2007. Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 39.1	40 CFR 82, Subpart F	Subpart F – Recycling and Emissions Reduction	Comply with the standards for recycling and emission reduction of refrigerants set forth in 40 CFR 82 Subpart F.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 39.2	40 CFR 82, Subpart G	Subpart G – Significant New Alternatives Policy	Comply with the applicable prohibitions set out in 40 CFR 82.174.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 39.3	40 CFR 82, Subpart H	Subpart H – Halon Emissions Reduction	Comply with the applicable prohibitions set out in 40 CFR 82.270.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 40 through 42	40 CFR 63.1(b), 63.5(b)(4), 63.6(c)(1), 63.9(b), 63.10(b)(3), Subpart A	40 CFR 63 NESHAP Applicability Determinations	Determine rule applicability and designation of affected sources under NESHAPs for Source Categories (40 CFR 63) in accordance with the procedures described in 40 CFR 63.1(b) and 63.10(b)(3).	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 43.1	40 CFR 71.6(c)(6)	NSPS and NESHAP Reports	Attach to the operating report for the period covered by the report a copy of any NSPS and NESHAPs reports submitted to the EPA Region 10.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 43.2	40 CFR 71.6(c)(6)	General NSPS and NESHAP Requirements - Waivers	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.	Yes.	Annual Compliance Audit.

FORM E1
Stationary Source-Wide Applicable Requirements

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0059TVP03, Rev. 2 – Condition 44	18 AAC 50.345(a) & (e)	Standard Terms and Conditions	Each permit term and condition is independent and remains valid regardless of a challenge to any other part of the permit.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 45	18 AAC 50.345 (a) & (f)	Standard Terms and Conditions	Requested permit changes do not stay any permit condition.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 46	18 AAC 50.345 (a) & (g)	Standard Terms and Conditions	The permit does not convey any property rights of any sort, nor any exclusive privilege.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 47	18 AAC 50.400, 50.403	Administration Fees	Pay all assessed permit administration fees.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 48	18 AAC 50.410, 50.420	Assessable Emissions	Pay to the Department an annual emission fee based on the stationary source's assessable emissions.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 49	18 AAC 50.410, 50.420	Assessable Emissions Estimates	Submit an estimate of the stationary source's assessable emissions. 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.	Yes.	Report in accordance with Conditions 49.2 and 49.3.
AQ0059TVP03, Rev. 2 – Condition 51	18 AAC 50.045(a)	Dilution	Do not dilute emissions with air to comply with this permit.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 52	18 AAC 50.045(d)	Reasonable Precautions to Prevent Fugitive Dust	Take reasonable precautions to prevent particulate matter from being emitted into the ambient air.	Yes.	Monitor, record, and report in accordance with Conditions 52.1 and 52.2.

FORM E1
Stationary Source-Wide Applicable Requirements

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0059TVP03, Rev. 2 – Condition 53	18 AAC 50.055(g)	Stack Injection	Do not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, except as authorized by a construction permit, Title V permit, or air quality control permit issued before October 1, 2004.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 54	18 AAC 50.110	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 interferes with the enjoyment of life or property.	Yes.	Monitor, record, and report in accordance with Conditions 54.1 through 54.3.
AQ0059TVP03, Rev. 2 – Condition 55	18 AAC 50.235	Technology-Based Emission Standard	If an unavoidable emergency, malfunction, or non-routine repair causes emissions in excess of a technology-based emission standard, take all reasonable steps to minimize levels of emissions that exceed the standard, and report.	Yes.	Report in accordance with Condition 62.
AQ0059TVP03, Rev. 2 – Condition 56	18 AAC 50.065	Open Burning	If open burning is conducted at this stationary source, comply with the requirements of 18 AAC 50.065.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 57	18 AAC 50.220(a)	Requested Source Tests	Conduct source testing as requested by the Department to determine compliance with applicable permit requirements.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 58	18 AAC 50.220(b)	Operating Conditions	Conduct source testing at a point or points that characterize the actual discharge into the ambient air; and at the maximum rated burning or operating capacity of the emission unit.	Yes.	Annual Compliance Audit
AQ0059TVP03, Rev. 2 – Condition 59	18 AAC 50.220(c)(1)(A)-(F) & (c)(2)	Reference Test Methods	Use the referenced test methods when conducting source testing for compliance with the permit.	Yes.	Comply with the test methods listed in Conditions 59.1 through 59.7.

FORM E1
Stationary Source-Wide Applicable Requirements

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0059TVP03, Rev. 2 – Condition 60	18 AAC 50.220(c)(3)	Excess Air Requirements	Standard exhaust gas volumes must include only the volume of gases formed from the theoretical combustion of the fuel, plus the excess air volume normal for the specific emissions unit type, corrected to standard conditions.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 61	18 AAC 50.345(a)	Test Exemption	It is not required to comply with Conditions 63, 64, and 65 when the exhaust is observed for visible emissions by a Method 9 Plan.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 62	18 AAC 50.345(a) & (l)	Test Deadline Extension	An extension may be requested to a source test deadline established by the Department.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 63	18 AAC 50.345(a) & (m)	Test Plans	Before conducting any source tests, submit a plan to the Department.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 64	18 AAC 50.345(a) & (n)	Test Notification	At least 10 days before conducting a source test, give the Department written notice of the date and the time the source test will begin.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 65	18 AAC 50.345(a) & (o)	Test Reports	Within 60 days after completing a source test, submit two copies of the results.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 66	18 AAC 50.220(f)	Particulate Matter Calculations	In source testing for compliance with the particulate matter standards, the three-hour average is determined using the average of three one-hour test runs.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 67	40 CFR 60.7(f)	Recordkeeping Requirements	Keep all records required by this permit for at least five years after the date of collection.	Yes.	Report in accordance with Conditions 67.1 and 67.2.

FORM E1
Stationary Source-Wide Applicable Requirements

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0059TVP03, Rev. 2 – Condition 68	18 AAC 50.345(j)	Certification	Certify any permit application, report, affirmation, or compliance certification submitted to the Department and required under the permit by including the signature of a responsible official.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 69	40 CFR 71.6(a)(3)(iii) (A)	Submittals	Submit one certified copy of reports, compliance certifications, and/or other submittals required by this permit.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 70	18 AAC 50.200	Information Requests	Furnish 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.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 71	18 AAC 50.235(a)(2)	Excess Emissions and Permit Deviation Reports	Report all emissions or operations that exceed or deviate from the requirements of the permit.	Yes.	Report in accordance with Conditions 71.1 through 71.3.
AQ0059TVP03, Rev. 2 – Condition 72	18 AAC 50.346 (a)	Operating Reports	Submit an operating report by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.	Yes.	Report in accordance with Conditions 72.1 through 72.5.
AQ0059TVP03, Rev. 2 – Condition 73	40 CFR 71.6(c)(5)	Annual Compliance Certification	Each year by March 31, compile and submit to the Department an annual compliance certification report.	Yes.	Report in accordance with Conditions 73.1 through 73.3.
AQ0059TVP03, Rev. 2 – Condition 74	18 AAC 50.346(b)(8), 40 CFR 51.15, 51.30(a)(1) & (b)(1)	Emission Inventory Reporting	Submit to the Department reports of actual emissions for the previous calendar year, by emission unit, of CO, NH ₃ , NO _x , PM ₁₀ , PM _{2.5} , SO ₂ , VOC, and lead (Pb) and lead compounds	Yes.	Report in accordance with Conditions 74.1 through 74.5.
AQ0059TVP03, Rev. 2 – Condition 75	40 CFR 71.10(d)(1)	Permit Applications	Comply with the requirements for submitting application information to the EPA Region 10.	Yes.	Annual Compliance Audit.

FORM E1
Stationary Source-Wide Applicable Requirements

Permit and Condition Number	Applicable Requirement Citation ¹	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0059TVP03, Rev. 2 – Condition 76	40 CFR 71.6(a)(8)	Emission Trading	No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 77	40 CFR 71.6(a)(12)	Off Permit Changes	The Permittee may make changes that are not address or prohibited by this permit.	Yes.	Monitor, record, and report in accordance with Conditions 77.1 through 77.4.
AQ0059TVP03, Rev. 2 – Condition 78	40 CFR 71.6(a)(13)	Operational Flexibility	Section 502(b)(10) changes may be made within the permitted stationary source without requiring a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit.	Yes.	Report in accordance with Conditions 78.1 and 78.2.
AQ0059TVP03, Rev. 2 – Condition 79	18 AAC 50.326(c)(2) & (j)(2), 40 CFR 71.5(a)(1)(iii), 71.7(b) & (c)(1)(ii)	Permit Renewal	Submit to the Department a renewal application no sooner than January 8, 2024 and no later than January 8, 2025.	Yes.	Annual Compliance Audit.
AQ0059TVP03, Rev. 2 – Condition 80 through 84	18 AAC 50.345(a)-(d), & (h)	General Compliance Requirements	Comply with each permit term and condition and allow the Department access to the facility.	Yes.	Annual Compliance Audit.

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

FORM E3
Title V Condition Change Request

Permit Number: AQ0059TVP03, Rev. 2

Title V Permit Information (attach additional sheets as needed):

Current Title V Operating Permit Condition Number	Type of change (revise or remove)	Reason for change	Requested Alaska Title V Operating Permit Condition
AQ0059TVP03, Rev. 2 – All Standard Conditions	Revise	Revise all Standard Conditions throughout the permit with the updated July 22, 2020 Standard Conditions.	Revise all Standard Conditions throughout the permit with the updated July 22, 2020 Standard Conditions.
AQ0059TVP03, Rev. 2 – Section 1, Identification	Revise	The Permittee’s Responsible Officials have changed.	Revise the Permittee’s Responsible Official to: Luke Saugier, Senior Vice President Trudi Hallett, Asset Team Lead Chris Kanyer, Asset Team Lead Anthony McConkey, Asset Team Lead Jill Fisk, Asset Team Lead
AQ0059TVP03, Rev. 2 – Section 1, Identification	Revise	The Stationary Source and Building Contact and Permit Contact have changed.	Revise the Permit Contact as follows: Natalia Lau, Environmental Specialist 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503 (907) 777-8304 natalia.lau@hilcorp.com
AQ0059TVP03, Rev. 2 – Section 1, Identification	Revise	The Fee Contact address has changed.	Revise the Fee Contact address as follows: Hilcorp Alaska, LLC / Accounts Payable 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503
AQ0059TVP03, Rev. 2 – Section 2, Table A – Emission Unit Inventory	Revise	The emissions unit inventory has changed.	Update the emission unit inventory as indicated on Form B. <ul style="list-style-type: none"> - Add EU IDs 44 and 45, emergency generator engines. - Add fuel gas rating for EU ID 2. - Combine EU IDs 24 and 25. - Remove insignificant EU ID 42a. - Add EU ID 46, Sand Pit Burner. - Remove decommissioned EU IDs 23, 23A, and 26.

FORM E3
Title V Condition Change Request

Current Title V Operating Permit Condition Number	Type of change (revise or remove)	Reason for change	Requested Alaska Title V Operating Permit Condition
AQ0059TVP03, Rev. 2 – All Applicable Permit Conditions and Shields	Revise/Remove	The emissions unit inventory has changed; thus conditions and permit shields should be revised ore removed to reflect the changes.	Revise applicable permit conditions to incorporate inventory changes. <ul style="list-style-type: none"> - Incorporate new EU IDs 44, 45, and 46 as indicated in the Forms B1 and B2. For example, add EU IDs 44 and 45 to Condition 30 and 35.1. - Remove EU IDs 23, 23A, 26, and 42a from all permit conditions and shields. For example, remove Condition 19 which only applies to EU IDs 23 and 23A, and remove EU ID 26 from the list of flares (currently 24 through 33).
AQ0059TVP03, Rev. 2 – Condition 18	Remove	EU IDs 40 and 41 are emergency engines. Pursuant to the memorandum from John S. Seitz of the EPA, 500 hours of operation is an appropriate default assumption for estimating the number of hours an emergency generator could be expected to operate per year. Use of 500 hours for PTE calculations in previous Title V applications should not have resulted in a limit nor was it established in a Title I permit process.	Remove Condition 18 limiting EU IDs 40 and 41 to no more than 500 hours per 12-month period, each.
AQ0059TVP03, Rev. 2 – Condition 29	Revise	NSPS Subpart A Concealment of Emissions should reference the standards for NSPS Subpart JJJJ.	Revise the condition to reference the standards set forth in Condition 30.1 for NSPS Subpart JJJJ instead of Condition 31 for NSPS Subpart OOOOa.
AQ0059TVP03, Rev. 2 – Condition 30.7c	Revise	NESHAP Subpart JJJJ was updated August 24, 2024, and these changes should be reflected in the permit.	Update Condition 30.7c to remove reference to 40 CFR 90 per update to 40 CFR 60.4245(a)(3).

FORM E3
Title V Condition Change Request

Current Title V Operating Permit Condition Number	Type of change (revise or remove)	Reason for change	Requested Alaska Title V Operating Permit Condition
AQ0059TVP03, Rev. 2 – Condition 31	Revise	NSPS Subpart OOOOa was updated March 8, 2024, and these changes should be reflected in the permit. Cross-referencing MR&R in Subpart OOOOa in lieu of writing all applicable conditions is preferred to streamline the permit and reduce errors carried over from revised requirements.	<p>Update the language in Condition 31 as applicable to reflect regulation changes in Subpart OOOOa, such as:</p> <ul style="list-style-type: none"> - Condition 31 – specify rule applies to well sites constructed after September 28, 2015 and on or before December 6, 2022. - Condition 31.2f – 60 days replaced with 90 days. - Condition 31.2g(i) – semiannual defined as 4 to 7 months. - Condition 31.2h – repair and replace no later than 30 calendar days replaced with exceptions per 40 CFR 60.5397a(h). <p>Cross-referencing MR&R in Subpart OOOOa in lieu of writing all applicable conditions is preferred to streamline the permit and reduce errors.</p>
AQ0059TVP03, Rev. 2 – Condition 32	Revise	40 CFR 62 Subpart III will be updated on January 10, 2025 with the promulgation of 40 CFR 62 Subpart IIIa, and these changes should be reflected in the permit.	Revise the language in Condition 32 as applicable to reflect changes in 40 CFR 62 Subpart III, moving applicability for EU 2 to the new Subpart IIIa under 40 CFR 62.14530a(1).
AQ0059TVP03, Rev. 2 – Conditions 35.2 and 35.3	Revise	NESHAP Subpart ZZZZ was updated August 30, 2024, and these changes should be reflected in the permit.	Revise the language in Condition 35 as applicable to reflect regulation changes in NESHAP Subpart ZZZZ, such as the new requirement for oil changes to be within 1 year + 30 days instead of annually.
New Requirement	Add	Add NSPS Subpart OOOOb requirements for fugitive emissions at well sites.	<p>Add NSPS Subpart OOOOb requirements for fugitive emissions at well sites.</p> <p>Cross-referencing MR&R in Subpart OOOOb in lieu of writing all applicable conditions is preferred to streamline the permit and reduce errors.</p>

FORM E4
Permit Shield Request

Permit Number: AQ0059TVP03, Rev. 2

Non-applicable requirements (*attach additional sheets as needed*):

Non-Applicable Requirements ¹	Reason for non-applicability and citation/basis
40 CFR 60 Subparts D, Da, Db, Dc	No affected EUs within the permitted stationary source.
40 CFR 60 Subparts K, Ka, Kb, and Kc (other than Tank 22)	All storage vessels for petroleum liquids and volatile organic liquids at this stationary source were constructed, reconstructed, or modified prior to June 11, 1973. Therefore, the requirements of Subparts K, Ka, and Kb do not apply. The permit shields for Subparts K, Ka, and Kb only apply to the currently installed units until modified, reconstructed, or replaced.
40 CFR 60 Subparts K, Ka, Kb, and Kc (Tank 22)	Tank 22 commenced construction after July 23, 1984. Therefore, the requirements of NSPS Subparts K and Ka do not apply. Tank 22 is also a “process tank,” not a “storage vessel,” and is thus exempt from NSPS Subpart Kb.
40 CFR 60 Subpart KKK	Swanson River Field is not currently engaged in “the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both” (i.e., is not a <i>natural gas processing plant</i> as defined at 40 CFR 60.631). Therefore the requirements of this rule do not apply to this stationary source. This shield only applies, however, to the extent that Swanson River Field does not engage in these operations.
40 CFR 60 Subpart LLL	Pursuant to 40 CFR 60.641, affected equipment includes each sweetening unit, and each sweetening unit followed by a sulfur recovery unit. This stationary source does not have any sweetening units. Therefore, the requirements of Subpart LLL do not apply.
40 CFR 61 Subpart J	The stationary source does not contain any equipment in benzene service.
40 CFR 61 Subparts A and V	Per 40 CFR 61.240(b), a facility must be subject to a specific subpart of 40 CFR 61 to be subject to these subparts.
40 CFR 63 Subpart R	40 CFR 63, Subpart R applies to bulk gasoline terminals and pipeline breakout stations located at a major source of HAPs. This stationary source is not a major source of HAPs. Therefore, the requirements of Subpart R do not apply.
40 CFR 63 Subpart HHH	The stationary source is not a major source of HAPs as defined in 40 CFR 63.1271.
40 CFR 63 Subpart EEEE (organic liquids distribution MACT)	This stationary source is exempt from the requirements of Subpart EEEE under 40 CFR 63.2334(c)(1).
40 CFR 63 Subpart DDDDD	This stationary source is not a major source of HAPs as defined in 40 CFR 63.2.
40 CFR 63 Subpart GGGGG	The site remediation at the Pipe and Supply Yard does not meet all of the criteria at 40 CFR 63.7881(c) and therefore is not an affected facility.
40 CFR 63 Subpart BBBB	40 CFR 63, Subpart BBBB applies to gasoline storage tanks, gasoline loading racks, vapor collection-equipped cargo tanks, and equipment components in vapor or liquid gasoline service at a Gasoline Distribution Bulk Terminal, Bulk Plant, or Pipeline Facilities that meets the criteria specified in Tables 1 through 3 of this subpart. This stationary source is not a Gasoline Distribution Bulk Terminal, Bulk Plant, or Pipeline Facility. Therefore, the requirements of Subpart BBBB do not apply.
40 CFR 63 Subpart JJJJJ	No affected EUs within the permitted stationary source.

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



Attachment

Permits

Operating Permit No. AQ0059TVP03, Rev. 2
7/18/2023 Off Permit Change Notification
10/18/2023 Off Permit Change Notification

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AIR QUALITY OPERATING PERMIT

Permit No. AQ0059TVP03
Revision 2: FINAL - September 6, 2022

Issue Date: FINAL - July 8, 2020
Expiration Date: July 8, 2025

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

The Swanson River Field and the Cook Inlet Onshore Drilling and Well Testing Program are considered one stationary source for purposes of determining classification under 18 AAC 50.326(a) and applicability with the modification requirements of 18 AAC 50.302 and 50.502.

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

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

Upon the effective date of this permit, Operating Permit AQ0059TVP02, including all revisions, expires.

This operating permit becomes effective August 7, 2020.

Revision 2 becomes effective September 6, 2022.



James R. Plosay, Manager
Air Permits Program

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Abbreviations and Acronyms

2SLB.....	2 stroke lean burn	NAICS.....	North American Industry Classification System
AAC.....	Alaska Administrative Code	NESHAPs.....	Federal National Emission Standards for Hazardous Air Pollutants [as contained in 40 CFR 61 and 63]
ADEC	Alaska Department of Environmental Conservation	NO _x	nitrogen oxides
AS.....	Alaska Statutes	NSPS	Federal New Source Performance Standards [as contained in 40 CFR 60]
ASTM.....	American Society for Testing and Materials	O & M.....	operation and maintenance
BACT	best available control technology	O ₂	oxygen
BHp	boiler horsepower	PAL	plantwide applicability limitation
Btu	British thermal units	PM-10	particulate matter less than or equal to a nominal 10 microns in diameter
CFR	Code of Federal Regulations	PM-2.5.....	particulate matter less than or equal to a nominal 2.5 microns in diameter
CI.....	compression ignition	ppm	parts per million
The Act.....	Clean Air Act	ppmv, ppmvd	parts per million by volume, on a dry basis
CO	carbon monoxide	ppmw	parts per million by weight
dscf.....	dry standard cubic foot	psia	pounds per Square Inch (absolute)
EPA	US Environmental Protection Agency	PSD	prevention of significant deterioration
EU.....	emission unit	PTE	potential to emit
gr/dscf.....	grain per dry standard cubic foot (1 pound = 7000 grains)	RICE	reciprocating internal combustion engine
gph.....	gallons per hour	SIC.	Standard Industrial Classification
HAPs	hazardous air pollutants [as defined in AS 46.14.990]	SO ₂	sulfur dioxide
hp.....	horsepower	tph	tons per hour
ID.....	emission unit identification number	tpy	tons per year
ISO.....	International Organization for Standardization	UA.....	urbanized area
kPa.....	kilopascals	UC	urban cluster
kW	kilowatts	VOC	volatile organic compound [as defined in 40 CFR 51.100(s)]
LAER.....	lowest achievable emission rate	VOL	volatile organic liquid [as defined in 40 CFR 60.111b, Subpart Kb]
MACT	maximum achievable control technology [as defined in 40 CFR 63]	vol%	volume percent
MMBtu/hr.....	million British thermal units per hour	wt%	weight percent
MMscf.....	million standard cubic feet		
MR&R	monitoring, recordkeeping, and reporting		
NA	not applicable		

Section 1. Stationary Source Information

Identification

Permittee:	Hilcorp Alaska, LLC 3800 Centerpoint Dr. Suite 1400 Anchorage, AK 99503	
Stationary Source Name:	Swanson River Field	
Location:	60° 43' 37" North; 150° 52' 23" West, and T7N to T8N, R9W, Seward Meridian	
Physical Address:	Kenai Peninsula, AK	
Owner and Operator:	Hilcorp Alaska, LLC 3800 Centerpoint Dr. Suite 1400 Anchorage, AK 99503	
Permittee's Responsible Officials:	Luke Saugier, Senior Vice President Vanessa Hughes, Asset Team Lead Matt Brown, Asset Team Lead Bradley Simpson, Asset Team Lead 3800 Centerpoint Dr. Suite 1400 Anchorage, AK 99503	
Designated Agent:	CT Corporation System 9360 Glacier Highway, Suite 202 Juneau, AK 99801	
Stationary Source and Building Contact:	Natalia Lau, Air Specialist 3800 Centerpoint Dr. Suite 1400 Anchorage, AK 99503 (907) 777-8300 dwilkins@hilcorp.com	
Permit Contact:	Julieanna Potter, Environmental Specialist 3800 Centerpoint Dr. Suite 1400 Anchorage, AK 99503 (907) 777-8444 jupotter@hilcorp.com	
Fee Contact:	Hilcorp Alaska, LLC Accounts Payable PO Box 61529 Houston, TX 77208	
Process Description:	SIC Code	1311 - Crude Petroleum and Natural Gas
	NAICS Code:	211111 - Crude Petroleum and Natural Gas Extraction

[18 AAC 50.040(j)(3) & 50.326(a)]
 [40 CFR 71.5(c)(1) & (2)]

Section 2. Emission Unit Inventory and Description

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

Table A - Emission Unit Inventory

EU ID	Tag Number	Emission Unit Name	Emission Unit Description	Rating/Size	Fuel	Installation or Construction Date
1	S-B-8820	Plant Boiler F-201	Cleaver Brooks CB760-150	6.275 MMBtu/hr	Fuel Gas	Pre-1975
2	S-Incinerator	Refuse Incinerator	Incinomite J83 DS	150 lb/hr	Fuel Gas	Pre-1975
8	S-RCP-DC0K11	Compressor Drive K-11	Clark TLA-10	3,777 hp	Fuel Gas	1965
9	S-RCP-DC0K12	Compressor Drive K-12	Clark TLA-10	3,777 hp	Fuel Gas	1965
10	S-RCP-DC0K13	Compressor Drive K-13	Clark TLA-10	3,777 hp	Fuel Gas	1965
11	S-RCP-DC0K14	Compressor Drive K-14	Clark TLA-10	3,777 hp	Fuel Gas	1965
12	S-RCP-DC0K15	Compressor Drive K-15	Clark TLA-10	3,777 hp	Fuel Gas	1967
13	S-RCP-DC0K17	Compressor Drive K-17	Clark TLAD-10	4,000 hp	Fuel Gas	1974
14	S-RCP-DC0K18	Compressor Drive K-18	Clark TLAD-10	4,000 hp	Fuel Gas	1974
23	S-G-EMERG02G	Emergency Generator	Waukesha #2	200 kW	Fuel Gas	Pre-June 12, 2006
23A	S-G-EMERG03G	Emergency Generator	Waukesha #3	250 kW	Fuel Gas	Pre-June 12, 2006
24	S-SP-150#	Flare (150#)	Flare (150#)	1.458 MMBtu/hr	Fuel Gas	Pre-1975
25	S-SP-MAIN	Main Flare (900#)	Main Flare (900#)	14.583 MMBtu/hr	Fuel Gas	Pre-1975
26	S-SP-45#	Smokeless Flare (45#)	Smokeless Flare (45#)	0.083 MMscf/hr	Fuel Gas	Unknown
27	S-SP 1-27	Flare 1-27	Flare	0.345 MMscf/hr	Fuel Gas	Unknown
28	S-SP 1-33	Flare 1-33	Flare	0.605 MMscf/hr	Fuel Gas	Unknown
29	S-SP 1-4	Flare 1-4	Flare	3.744 MMscf/hr	Fuel Gas	Unknown

EU ID	Tag Number	Emission Unit Name	Emission Unit Description	Rating/Size	Fuel	Installation or Construction Date
30	S-SP 1-9	Flare 1-9	Flare	3.903 MMscf/hr	Fuel Gas	Unknown
31	S-SP 2-15	Flare 2-15	Flare	0.126 MMscf/hr	Fuel Gas	Unknown
32	S-SP 3-4	Flare 3-4	Flare	2.305 MMscf/hr	Fuel Gas	Unknown
33	S-SP 3-9	Flare 3-9	Flare	2.085 MMscf/hr	Fuel Gas	Unknown
36	S-V-8580	TEG Regenerator Vent	CIGGS1 Dehydration Unit	105 MMscfd	NA	Pre-1997
37	S-V-9050	TEG Regenerator Vent	CIGGS2 Dehydration Unit	105 MMscfd	NA	Pre-1997
38	NA	Gasoline Dispensing Facility	Located at the Shop	NA	NA	Pre-November 9, 2006
39	NA	Gasoline Dispensing Facility	Located at the Pipe and Supply Yard	NA	NA	Pre-November 9, 2006
40	S-RCP-EMER01	Generator	Generac Guardian RV	19 kW	Gasoline	June 21, 2007 ¹
41	S-RCP-EMER02	Generator	Generac Guardian RV	19 kW	Gasoline	June 21, 2007 ¹
42a	S-ZENV-155	Boiler	Hurst Boiler	2.7 MMBtu/hr	Fuel Gas	Unknown
43	N/A	Emergency Generator	Generator	20 kW	Fuel Gas	2019

Notes:

¹ Manufacture date.

[18 AAC 50.326(a)]
 [40 CFR 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, 8 through 14, 23, 23A, 24 through 33, 36, 37, 40, 41, 42a, and 43 listed in Table A and boilers, heaters, and flares in Section 12 to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

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

- 1.1. For each boiler and heater listed in Section 12, as long as actual emissions from the emissions unit are less than the significant emissions thresholds listed in 18 AAC 50.326(e) during any consecutive 12-month period, monitoring shall consist of an annual compliance certification under Condition 73 with the visible emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 72 if any boiler or heater listed in Section 12 reaches any of the significant emissions thresholds listed in 18 AAC 50.326(e) and monitor, record, and report in accordance with Conditions 3 through 5 for the remainder of the permit term for that emissions unit.
- 1.2. For EU IDs 1, 8 through 14, 23, 23A, 42a, and 43, burn only gas as fuel. In each operating report under Condition 72, indicate whether each of these emissions units burned only gas during the period covered by the report. Report under Condition 71 if any fuel other than gas is burned in any of these emissions units.
- 1.3. For EU IDs 24 through 33 and flares listed in Section 12, monitor, record, and report in accordance with Condition 6.
- 1.4. For each of EU IDs 40 and 41, monitoring shall consist of an annual compliance certification under Condition 73 for the visible emissions standard based on reasonable inquiry.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 CFR 71.6(a)(3)]

- 2. Incinerator Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, through the exhaust of EU ID 2 to reduce visibility by more than 20 percent averaged over any six consecutive minutes.

[18 AAC 50.040(j), 50.326(j), & 50.050(a)]
[40 CFR 71.6(a)(1)]

- 2.1. Observe emissions for 18 consecutive minutes to obtain a minimum of 72 observations in accordance with Method 9 of 40 CFR 60, Appendix A, at least once every 12 calendar months. If the incinerator is not operated during this period, observe emissions the next time the unit operates.
- 2.2. Record and report in accordance with Conditions 4.1.a through 5.2.a.

- 2.3. If any monitoring under Condition 2.1 was not performed, report under Condition 71 within three days of the date the monitoring was required.

[18 AAC 50.040(j) & 50.326(j)(4)]
[40 CFR 71.6(a)(3) & (c)(6)]

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

Liquid Fuel-Burning Equipment

3. **Visible Emissions Monitoring.** When required by Condition 1.1, the Permittee shall observe the exhaust of the boilers and heaters in Section 12 for visible emissions using the Method 9 Plan under Condition 3.2.

[18 AAC 50.040(j), 50.326(j), & 50.346(c)]
[40 CFR 71.6(a)(3)(i)]

- 3.1. The Permittee may, for each unit, elect to continue the visible emissions monitoring schedule specified in Conditions 3.2.b through 3.2.e that remains in effect from a previous permit.
- 3.2. **Method 9 Plan.** For all observations in this plan, observe the emissions unit exhaust following 40 CFR 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations.¹
- a. First Method 9 Observation. Except as provided in Condition 3.1, observe the exhaust(s) of each boiler and heater listed in Section 12 according to the following criteria:
- (i) For each boiler and heater in Section 12, observe the exhaust of the emissions unit within 30 days after the end of the calendar month during which monitoring was triggered under Condition 1.1; or for an emissions unit with intermittent operations, within the first 30 days during the unit's next scheduled operation.
- b. Monthly Method 9 Observations. After the first Method 9 observation conducted under Condition 3.2.a, perform observations at least once in each calendar month that an emissions unit operates.
- c. Semiannual Method 9 Observations. After at least three monthly observations under Condition 3.2.b, unless a six-consecutive-minute average opacity is greater than 15 percent and one or more individual observations are greater than 20 percent, perform semiannual observations
- (i) no later than seven months, but not earlier than five months, after the preceding observation; or
- (ii) for an emission unit with intermittent operations, during the next scheduled operation immediately following seven months after the preceding observation.

¹ Visible emissions observations are not required during emergency operations.

- d. Annual Method 9 Observations. After at least two semiannual observations under Condition 3.2.c, unless a six-consecutive-minute average opacity is greater than 15 percent and one or more individual observations are greater than 20 percent, perform annual observations:
 - (i) no later than 12 months, but not earlier than 10 months, after the preceding observation; or
 - (ii) for an emissions unit with intermittent operations, during the next scheduled operation immediately following 14 months after the preceding observation.
- e. Increased Method 9 Frequency. If a six-consecutive-minute average opacity is observed during the most recent set of observations to be greater than 15 percent and one or more individual observations are greater than 20 percent, then increase or maintain the observation frequency for that emissions unit to at least monthly intervals as described in Condition 3.2.b, and continue monitoring in accordance with the Method 9 Plan.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 CFR 71.6(a)(3)(i)]

4. Visible Emissions Recordkeeping. The Permittee shall keep records as follows:

- 4.1. For all Method 9 Plan observations,
 - a. the observer shall record the following:
 - (i) the name of the stationary source, emission unit and location, emission unit type, observer's name and affiliation, and the date on the Visible Emission Observation Form in Section 13;
 - (ii) the time, estimated distance to the emissions location, sun location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating rate (load or fuel consumption rate or best estimate if unknown) on the sheet at the time opacity observations are initiated and completed;
 - (iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;
 - (iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emission Observation Form in Section 13, and
 - (v) the minimum number of observations required by the permit; each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.
 - b. To determine the six-consecutive-minute average opacity,

- (i) divide the observations recorded on the record sheet into sets of 24 consecutive observations;
 - (ii) sets need not be consecutive in time and in no case shall two sets overlap;
 - (iii) for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; and
 - (iv) record the average opacity on the sheet.
- c. Calculate and record the highest six-consecutive- and 18-consecutive-minute average opacities observed.
- 4.2. The records required by Condition 4.1 may be kept in electronic format.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 CFR 71.6(a)(3)(ii)]

5. Visible Emissions Reporting. The Permittee shall report as follows:

- 5.1. Include in each operating report required under Condition 72 for the period covered by the report:
- a. for all Method 9 Plan observations,
 - (i) copies of the observation results (i.e., opacity observations) for each emissions unit, except for the observations the Permittee has already supplied to the Department; and
 - (ii) a summary to include:
 - (A) number of days observations were made;
 - (B) highest six-consecutive- and 18-consecutive-minute average opacities observed; and
 - (C) dates when one or more observed six-consecutive-minute average opacities were greater than 20 percent; and
 - (iii) a summary of any monitoring or recordkeeping required under Conditions 3 and 4 that was not done.

5.2. Report under Condition 71:

- a. the results of Method 9 observations that exceed 20 percent average opacity for any six-consecutive-minute period; and
- b. if any monitoring under Condition 3 was not performed when required, report within three days of the date the monitoring was required.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 CFR 71.6(a)(3)(iii)]

Flares

- 6. Visible Emissions MR&R.** The Permittee shall monitor, record, and report as follows:
- 6.1. Observe flare events² on EU IDs 24 through 33 and test flares listed in Section 12 for visible emissions following 40 CFR 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations according to the following schedule:
 - a. If a visible emission observation has not been previously conducted on any of EU IDs 24 through 33 and test flares listed in Section 12, the Permittee shall observe one daylight flare event within 12 months of the effective date of this permit.
 - b. Conduct subsequent visible emissions observations within 14 months of, but not earlier than three months after, the preceding flare event visible emissions observation.
 - c. If there are no flare events that meet the requirements of Condition 6.1.a or 6.1.b, the Permittee shall observe the next daylight flare event.
 - 6.2. Record the following information for each observed flare event:
 - a. flare EU ID number;
 - b. results of the Method 9 observations;
 - c. reason for flaring;
 - d. date, beginning and ending time of event; and
 - e. volume of gas flared.
 - 6.3. The records required by Condition 6.2 may be kept in electronic format.
 - 6.4. Monitoring of a flare event may be postponed for safety or weather reasons, or because a qualified observer is not available.
 - 6.5. Include the following in the operating report required by Condition 72 for the period covered by the report:
 - a. copies of the records required by Condition 6.2; and
 - b. if an annual flare event observation required by Condition 6.1.a or Condition 6.1.b has not been fulfilled for the year and/or monitoring of a flare event is postponed, an explanation of the reason the event was not monitored.
 - 6.6. Report under Condition 71 whenever the opacity standard in Condition 1 is exceeded.

² For purposes of this permit, a “*flare event*” is flaring of gas during daylight for greater than one hour as a result of scheduled release operations; i.e., maintenance or well testing activities. It does not include non-scheduled release operations, i.e. process upsets, emergency flaring, or de-minimis venting of gas incidental to normal operations.

- a. whenever the visible emissions standard in Condition 1 is exceeded; or
 - b. the monitoring required under Condition 6.1 is not completed, except as allowed under Condition 6.4.
- 6.7. If no flare events are monitored during a certification period, the Permittee shall certify compliance under Condition 73 with the visible emissions standard in Condition 1 based on reasonable inquiry.

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

Particulate Matter Emissions Standards

7. **Industrial Process and Fuel-Burning Equipment Particulate Matter.** The Permittee shall not cause or allow particulate matter emitted from EU IDs 1, 8 through 14, 23, 23A, 24 through 33, 36, 37, 40, 41, 42a, and 43 listed in Table A and boilers, heaters, and flares in Section 12 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

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

- 7.1. For each boiler and heater listed in Section 12, as long as actual emissions from the emissions unit are less than the significant emissions thresholds listed in 18 AAC 50.326(e) during any consecutive 12-month period, monitoring shall consist of an annual compliance certification under Condition 73 for the PM emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 72 if any boiler or heater listed in Section 12 reaches any of the significant emissions thresholds and monitor, record, and report in accordance with Conditions 8 through 10 for the remainder of the permit term for that emissions unit.
- 7.2. For EU IDs 1, 8 through 14, 23, 23A, 42a, and 43, the Permittee shall comply with Condition 1.2.
- 7.3. For EU IDs 24 through 33 listed in Table A and test flares listed in Section 12, the Permittee shall comply with Condition 6.
- 7.4. For EU IDs 40 and 41, the Permittee must annually certify compliance under Condition 73 for the PM standard based on reasonable inquiry.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 CFR 71.6(a)(3)]

PM MR&R

Liquid Fuel-Burning Boilers and Heaters

8. **PM Monitoring.** The Permittee shall conduct source tests on the boilers and heaters listed in Section 12 to determine the concentration of PM in the exhaust of each of the emissions units as follows:

-
- 8.1. If the result of any Method 9 observation conducted under Condition 3.2 for any boiler or heater listed in Section 12 results in an 18-minute average opacity greater than 20 percent opacity, the Permittee shall, within six months of that Method 9 observation, either:
- a. take corrective action and observe the emissions unit exhaust under load conditions comparable to those when the criteria were exceeded, following 40 CFR 60, Appendix A-4 Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations, to show that emissions are no longer greater than an 18-minute average opacity of 20 percent; or
 - b. except as exempted under Condition 8.3, conduct a PM source test according to the requirements in Section 6.
- 8.2. During each one-hour PM source test run under Condition 8.1, observe the emissions unit exhaust for 60 minutes in accordance with Method 9 and calculate the highest 18-consecutive-minute average opacity measured during each one-hour test run. Submit a copy of these observations with the source test report.
- 8.3. The PM source test requirement in Condition 8.1 is waived for an emission unit if:
- a. a source test on that unit has shown compliance with the PM standard during this permit term, or
 - b. corrective action was taken to reduce visible emissions and two consecutive 18-minute Method 9 visible emissions observations (as described in Condition 3.2) conducted thereafter within a six-month period show visible emissions less than the threshold in Condition 8.1.
- [18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 CFR 71.6(a)(3)(i)]
- 9. PM Recordkeeping.** The Permittee shall keep records of the results of any source test and visible emissions observations conducted under Condition 8.
- [18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 CFR 71.6(a)(3)(ii)]
- 10. PM Reporting.** The Permittee shall report as follows:
- 10.1. Notify the Department of any Method 9 observation results that are greater than the threshold of Condition 8.1 within 30 days of the end of the month in which the observations occurred. Include the dates, EU ID(s), and results when an observed 18-minute average opacity was greater than the threshold in Condition 8.1.
- 10.2. In each operating report required by Condition 72, include:
- a. a summary of the results of any source test and visible emissions observations conducted under Condition 8; and
-

- b. copies of any visible emissions observation results greater than the threshold in Condition 8.1, if they were not already submitted.
- 10.3. Report in accordance with Condition 71 any time the results of a source test exceed the PM emission standard in Condition 7.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 CFR 71.6(a)(3)(iii)]

Sulfur Compound Emission Standard

- 11. Sulfur Compound Emissions.** In accordance with 18 AAC 50.055(c), the Permittee shall not cause or allow sulfur compound emissions, expressed as SO₂, from EU IDs 1, 8 through 14, 23, 23A, 24 through 33, 36, 37, 40, 41, 42a, and 43, and boilers, heaters, and flares in Section 12 to exceed 500 ppm averaged over three hours.

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

Sulfur Compound Monitoring, Recordkeeping and Reporting (MR&R)

For Liquid Fuel (EU IDs 40 and 41 and boilers and heaters listed in Section 12)

- 12. Sulfur Compound Emissions Monitoring and Recordkeeping.** The Permittee shall monitor and keep records, as follows:

- 12.1. Comply with either Condition 12.1.a or Condition 12.1.b:

- a. For each shipment of fuel:
 - (i) If the fuel grade requires a sulfur content 0.5 percent by weight (wt% S_{fuel}) or less, keep receipts that specify fuel grade and amount; or
 - (ii) If the fuel grade does not require a sulfur content 0.5 wt% S_{fuel} or less, keep receipts that specify fuel grade and amount, and
 - (A) test the fuel for sulfur content; or
 - (B) obtain test results showing the sulfur content of the fuel from the supplier or refinery; the test results must include a statement signed by the supplier or refinery of what fuel they represent; or
- b. Test the sulfur content of the fuel in each storage tank that supplies fuel to EU IDs 40 and 41 and boilers and heaters listed in Section 12 at least monthly.

- 12.2. Fuel testing under Condition 12.1.a or Condition 12.1.b must follow an appropriate method listed in 18 AAC 50.035(b)-(c) or 40 CFR 60.17 incorporated by reference in 18 AAC 50.040(a)(1).

- 12.3. If a shipment of fuel contains greater than 0.75 wt% S_{fuel} or if the results of a fuel sulfur content test indicate that the fuel contains greater than 0.75 wt% S_{fuel} , the Permittee shall calculate SO₂ emissions in parts per million (ppm) using either the SO₂ material balance calculation in Section 14 or Method 19 of 40 CFR 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a)(3).

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

13. Sulfur Compound Emissions Reporting. The Permittee shall report as follows:

- 13.1. If SO₂ emissions calculated under Condition 12.3 exceed 500 ppm, the Permittee shall report in accordance with Condition 71. When reporting under this condition, include the calculation under Condition 12.3.

- 13.2. The Permittee shall include in the operating report required by Condition 72 for each month covered by the report:

- a. a list of the fuel grades received at the stationary source;
- b. for any fuel received with a fuel sulfur content greater than 0.5 wt% S_{fuel} , the fuel sulfur content of the shipment;
- c. the results of all fuel sulfur analyses conducted under Condition 12.1.a or Condition 12.1.b and documentation of the method(s) used to complete the analyses; and
- d. for any fuel received with a sulfur content greater than 0.75 wt% S_{fuel} , the SO₂ emissions in ppm calculated under Condition 12.3.

[18 AAC 50.040(j)(4), 50.326(j)(3), & 50.346(c)]
[40 CFR 71.6(a)(3)]

For Gas Fuel (EU IDs 1, 8 through 14, 23, 23A, 24 through 33, 42a, and 43 listed in Table A and test flares listed in Section 12)

- 14. Sulfur Compound Emissions Monitoring.** The Permittee shall analyze a representative sample of the gas fuel at least annually to determine the total 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 CFR 60.17 incorporated by reference in 18 AAC 50.040(a)(1).

- 15. Sulfur Compound Emissions Recordkeeping.** Keep records of the sulfur content analysis required under Condition 14.

16. Sulfur Compound Emissions Reporting. The Permittee shall:

- a. Report as excess emissions, in accordance with Condition 71, whenever the gas fuel combusted causes sulfur compound emissions to exceed the standard of Condition 11.
- b. Include copies of the records required by Condition 15 with the operating report required by Condition 72 for the period covered by the report.

[18 AAC 50.040(j) & 50.326(j)(4)]
[40 CFR 71.6(a)(3) & (c)(6)]

Pre-construction Permit³ Requirements

17. For any equipment listed in Section 12 and any substitute equipment allowed under Condition 24, the Permittee shall not burn any diesel fuel with a sulfur content greater than 0.5%.

[Condition 5, Permit to Operate 9423-AA009, 8/31/94, as amended through May 28, 1997]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

17.1. The Permittee shall:

- a. Monitor and keep records in accordance with Conditions 12.1 and 12.2.
- b. Report in accordance with Conditions 13.2.a and 13.2.b.
- c. Report in accordance with Condition 71 whenever the sulfur content of the fuel combusted in any equipment listed in Section 12 or any substitute equipment allowed under Condition 24 is greater than 0.5%.

[40 CFR 71.6(a)(3) & 71.6(c)(6)]

18. **Limit on Hours of Operation for EU IDs 40 and 41.** The Permittee shall limit the operation of EU IDs 40 and 41 to no more than 500 hours each in any consecutive 12-month period.

[Condition 12, Operating Permit AQ0059TVP02 Rev 3, 2/25/2014]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

- 18.1. The Permittee shall monitor and record the monthly hours of operation of EU IDs 40 and 41.

- 18.2. In the operating report required by Condition 72, report the monthly hours of operation and consecutive 12-month rolling total hours of operation of EU IDs 40 and 41 for each month of the reporting period.

[Conditions 12.1 & 12.2, Operating Permit AQ0059TVP02 Rev 3, 2/25/2014]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

- 18.3. Report under Condition 71 whenever a limit in Condition 18 is exceeded.

[40 CFR 71.6(a)(3) & 71.6(c)(6)]

19. **Limits on Hours of Operation for EU IDs 23 and 23A.** The Permittee shall limit the operation of EU IDs 23 and 23A to 100 hours each in any consecutive 12-month period.

[Condition 6, Operating Permit 059TVP01 Rev 1, 3/31/2004]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

³ *Pre-construction Permit* refers to federal PSD permits, state-issued permits-to-operate issued before January 18, 1997 (these permits cover both construction and operations), construction permits issued after January 17, 1997, and minor permits issued after October 1, 2004.

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- 19.1. The Permittee shall monitor and record the monthly hours of operation of EU IDs 23 and 23A.
- 19.2. In the operating report required by Condition 72, report the monthly hours of operation and consecutive 12-month rolling total hours of operation of EU IDs 23 and 23A during each month of the reporting period.
[Condition 6, Operating Permit 059TVP01 Rev 1, 3/31/2004]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]
- 19.3. Report under Condition 71 whenever a limit in Condition 19 is exceeded.
[40 CFR 71.6(a)(3) & 71.6(c)(6)]
- 20. Limits on Hours of Operation for EU IDs 12 through 14.** The Permittee shall limit the cumulative hours of operation of EU IDs 12, 13 and 14 to 17,520 hours in any consecutive 12-month period.
[Condition 8, Operating Permit 059TVP01 Rev 1, 3/31/2004]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]
- 20.1. The Permittee shall monitor and record the monthly hours of operation of EU IDs 12 through 14.
- 20.2. In the operating report required by Condition 72, report the monthly hours of operation and consecutive 12-month rolling total hours of operation of EU IDs 12 through 14 during each month of the reporting period.
[Condition 8, Operating Permit 059TVP01 Rev 1, 3/31/2004]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]
- 20.3. Report under Condition 71 whenever a limit in Condition 20 is exceeded.
[40 CFR 71.6(a)(3) & 71.6(c)(6)]
- 21. Limit on Throughput for EU ID 2.** The Permittee shall limit the mass of waste loaded to EU ID 2 to 300,000 pounds in any consecutive 12-month period.
[Condition 9, Operating Permit 059TVP01 Rev 1, 3/31/2004]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]
- 21.1. The Permittee shall monitor and record the monthly mass of waste loaded to EU ID 2.
- 21.2. In the operating report required by Condition 72, report the monthly mass and consecutive 12-month rolling total mass of waste loaded to EU ID 2 during each month of the reporting period.
[Condition 9, Operating Permit 059TVP01 Rev 1, 3/31/2004]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]
- 21.3. Report under Condition 71 whenever the limit in Condition 21 is exceeded.
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[40 CFR 71.6(a)(3) & 71.6(c)(6)]

- 22. Drilling Site Restrictions.** The Permittee shall limit the drilling and well testing operations to no more than 24 months per drill site within the Swanson River Field. Extension beyond this time frame will require Department approval.

[Condition 6, Operating Permit 061TVP01 Rev 2, 5/4/2004]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

- 22.1. Monitor, record and report in accordance with Condition 23.

[Condition 6.1, Operating Permit 061TVP01 Rev 2, 5/4/2004]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

- 23. Relocation of Drilling Rig.** The Permittee shall notify the Department prior to moving a drilling rig onto, or in, the Swanson River Field. Use the form in Section 11 to make this notification.

[Exhibit F, Permit to Operate 9423-AA009, 8/31/94, as amended through May 28, 1997]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1) & (a)(3)]

- 24. Operating Limits.** The Permittee shall use a drilling rig drawn from the pool of rigs identified in Section 12 of the permit. The source inventory of each of these rigs is detailed in Section 12, subject to change as allowed by the Relocation Notification Form in Section 11. The Permittee may substitute equipment provided the overall rated power capacity of the rig does not exceed that of the Nabors 160 rig.

[Condition 8, Operating Permit 061TVP01 Rev 2, 5/4/2004]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1) & (a)(3)]

- 25. Rig Engines, Boilers, and Heaters.** The Permittee shall limit the hours of operation for each emission unit listed by drilling rig in Section 12 (except flares) to 2,160 hours per year per drill site, on a 12-month rolling basis. This operational limit shall apply to any rig used.

[Condition 4 & Exhibit B, Permit to Operate 9423-AA009, 8/31/94, as amended through May 28, 1997]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

- 25.1. The Permittee shall monitor and record the monthly and consecutive 12-month rolling hours of operation for each emission unit listed by rig in Section 12 for the rig used at each site.

- 25.2. Report the monthly and consecutive 12-month rolling hours of operation for each emission unit listed by rig in Section 12 used at each site in accordance with Condition 72.

- 25.3. Notify the Department per Condition 71 should the 12-month rolling hours of operation for any emission unit used at each site exceed a limit in Condition 25.

[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

26. Rig Test Flare. The Permittee shall limit the operation of the rig test flare(s) listed in Section 12 to 30 MMscf per day per drill site.

[Exhibit B, Permit to Operate 9423-AA009, 8/31/94, as amended through May 28, 1997]
[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]

26.1. The Permittee shall monitor and record the daily volume of gas flared at each site.

26.2. Notify the Department per Condition 71 should the volume of gas flared on any day at any drill site exceed the limit in Condition 26.

[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(3)]

Insignificant Emission Units

27. 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:

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

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

27.2. **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)]

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

[18 AAC 50.055(c)]

27.4. **General MR&R for Insignificant Emission Units.** The Permittee shall comply with the following:

- a. Submit the compliance certifications of Condition 73 based on reasonable inquiry;
- b. Comply with the requirements of Condition 54; and
- c. Report in the operating report required by Condition 72 if an emissions unit has historically been classified as insignificant because of actual emissions less than the thresholds of 18 AAC 50.326(e) and current actual emissions have become greater than any of those thresholds.

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- d. No other monitoring, recordkeeping or reporting is required for insignificant emissions units to demonstrate compliance with the emissions standards under Conditions 27.1, 27.2, and 27.3.

[18 AAC 50.040(j)(3), 50.32(j)(3), & 50.346(b)(4)]
[40 CFR 71.6(a)(1) & (3)]

Section 4. Federal Requirements

40 CFR 60 Subpart A

28. New Source Performance Standards (NSPS) Subpart A Notification. For any existing facility⁴ regulated under NSPS requirements in 40 CFR 60, the Permittee shall furnish the Administrator written notification or, if acceptable to both the Administrator⁵ and the Permittee, electronic notification, as follows:

[18 AAC 50.035 & 50.040(a)(1)]
[40 CFR 60.15(d), Subpart A]

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

[40 CFR 60.15(d), Subpart A]

- a. the name and address of owner or operator,
- b. the location of the existing facility,
- c. a brief description of the existing facility and the components that are to be replaced,
- d. a description of the existing and proposed air pollution control equipment,
- e. an estimate of the fixed capital cost of the replacements, and of constructing a comparable entirely new facility,
- f. the estimated life of the existing facility after the replacements, and
- g. a discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.

29. 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 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 CFR 60.12, Subpart A]

⁴ *Existing facility* means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in this part, 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 CFR 60.2.

⁵ For Section 4 of this permit, the Department defines *Administrator* to mean the EPA Administrator and the Department.

40 CFR 60 Subpart JJJJ

30. For EU ID 43, comply with the following applicable requirements of NSPS Subpart JJJJ.

[18 AAC 50.040(a)(2)(PP), 50.040(j)(4) & 50.326(j)]

[40 CFR 71.6(a)(1)]

[40 CFR 60.4230(a)(iv), Subpart JJJJ]

NSPS Subpart JJJJ Emission Standards

30.1. Comply with the following emission standards:

[40 CFR 71.6(a)(1)]

[40 CFR 60.4233(d), Subpart JJJJ]

- a. NO_x + HC: 10 g/hp-hr
- b. CO: 387 g/hp-hr

[Table 1, Subpart JJJJ]

30.2. Owners and operators of stationary spark ignition (SI) internal combustion engines (ICE) must operate and maintain stationary SI ICE that achieve the emission standards as required in Condition 30.1 over the entire life of the engine.

[40 CFR 71.6(a)(1)]

[40 CFR 60.4234, Subpart JJJJ]

NSPS Subpart JJJJ Monitoring Requirements

30.3. You must install a non-resettable hour meter upon startup of your emergency engine.

[40 CFR 71.6(a)(3)]

[40 CFR 60.4237(c), Subpart JJJJ]

NSPS Subpart JJJJ Compliance Requirements

30.4. If you must comply with the emission standards specified in Condition 30.1, you must demonstrate compliance according to one of the methods specified in Conditions 30.4.a and 30.4.b.

[40 CFR 71.6(a)(3)]

[40 CFR 60.4243(b), Subpart JJJJ]

- a. Purchasing an engine certified according to procedures specified in NSPS Subpart JJJJ, for the same model year and demonstrating compliance according to one of the methods specified in Conditions 30.4.a(i) and 30.4.a(ii).

[40 CFR 60.4243(b)(1), Subpart JJJJ]

- (i) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance.
- (ii) If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to 40 CFR 60.4243(a)(2)(i).

[40 CFR 60.4243(a)(1) & (2), Subpart JJJJ]

- b. Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in Condition 30.1 and according to the requirements specified in §60.4244, as applicable, and according to Condition 30.4.b(i).

[40 CFR 60.4243(b)(2), Subpart JJJJ]

- (i) You must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.

[40 CFR 60.4243(b)(2)(i), Subpart JJJJ]

- 30.5. You must operate the emergency stationary ICE according to the requirements in Conditions 30.5.a through 30.5.c. In order for the engine to be considered an emergency stationary ICE under NSPS Subpart JJJJ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in Conditions 30.5.a through 30.5.c, is prohibited. If you do not operate the engine according to the requirements in Conditions 30.5.a through 30.5.c, the engine will not be considered an emergency engine under NSPS Subpart JJJJ and must meet all requirements for non-emergency engines.

[40 CFR 71.6(a)(3)]

[40 CFR 60.4243(d), Subpart JJJJ]

- a. There is no time limit on the use of emergency stationary ICE in emergency situations.

- b. You may operate your emergency stationary ICE for the purposes specified in Condition 30.5.b(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition 30.5.c counts as part of the 100 hours per calendar year allowed by this paragraph.

[40 CFR 60.4243(d)(1) & (2), Subpart JJJJ]

- (i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator 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 owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

[40 CFR 60.4243(d)(2)(i), Subpart JJJJ]

- c. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in Condition 30.5.b.

[40 CFR 60.4243(d)(3), Subpart JJJJ]

- 30.6. Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in 40 CFR 60.4244(a) through (f).

[40 CFR 71.6(a)(3)]

[40 CFR 60.4244, Subpart JJJJ]

NSPS Subpart JJJJ Notification, Reporting, and Recordkeeping Requirements

- 30.7. Owners and operators of all stationary SI ICE must keep records of the information in Conditions 30.7.a through 30.7.d.

[40 CFR 71.6(a)(3)]

[40 CFR 60.4245(a), Subpart JJJJ]

- a. All notifications submitted to comply with NSPS Subpart JJJJ and all documentation supporting any notification.
- b. Maintenance conducted on the engine.
- c. If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

- d. If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to Condition 30.4.a(ii), documentation that the engine meets the emission standards.

[40 CFR 60.4245(a)(1) through (4), Subpart JJJJ]

- 30.8. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

[40 CFR 71.6(a)(3)]

[40 CFR 60.4245(b), Subpart JJJJ]

40 CFR 60 Subpart OOOOa

- 31. The Permittee shall comply with the following applicable requirements in 40 CFR 60 Subpart OOOOa for those pads that have triggered applicability under Subpart OOOOa.

[18 AAC 50.040(a)(2)(ZZ), 50.040(j)(4) & 50.326(j)]

[40 CFR 71.6(a)(1)]

[40 CFR 60.5365a, Subpart OOOOa]

- 31.1. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall maintain and operate any affected facility 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 inspection of the source. The provisions for exemption from compliance during periods of startup, shutdown and malfunctions provided for in 40 CFR 60.8(c) do not apply to NSPS Subpart OOOOa.

[40 CFR 71.6(a)(1)]

[40 CFR 60.5370a(b), Subpart OOOOa]

NSPS Subpart OOOOa Fugitive Emissions GHG and VOC Standards

- 31.2. For the collection of fugitive emissions components at a well site, as defined in 40 CFR 60.5430a, you must reduce GHG (in the form of a limitation on emissions of methane) and VOC emissions by complying with the requirements of Conditions 31.2.a through 31.2.j.

[40 CFR 71.6(a)(1)]

[40 CFR 60.5397a, Subpart OOOOa]

- a. You must monitor all fugitive emission components, as defined in 40 CFR 60.5430a, in accordance with Conditions 31.2.b through 31.2.g. You must repair all sources of fugitive emissions in accordance with Condition 31.2.h. You must keep records in accordance with Condition 31.2.i and report in accordance with Condition 31.2.j. For purposes of this section, fugitive emissions are defined as: Any visible emission from a fugitive emissions component observed using optical gas imaging or an instrument reading of 500 ppm or greater using Method 21.
- b. You must develop an emissions monitoring plan that covers the collection of fugitive emissions components at well sites within each company-defined area in accordance with Conditions 31.2.c and 31.2.d.
- c. Fugitive emissions monitoring plans must include the elements specified in Conditions 31.2.c(i) through 31.2.c(viii), at a minimum.

[40 CFR 60.5397a(a) through (c), Subpart OOOOa]

 - (i) Frequency for conducting surveys. Surveys must be conducted at least as frequently as required by Conditions 31.2.f and 31.2.g.
 - (ii) Technique for determining fugitive emissions (i.e., Method 21 at 40 CFR part 60, appendix A-7, or optical gas imaging).
 - (iii) Manufacturer and model number of fugitive emissions detection equipment to be used.
 - (iv) Procedures and timeframes for identifying and repairing fugitive emissions components from which fugitive emissions are detected, including timeframes for fugitive emission components that are unsafe to repair. Your repair schedule must meet the requirements of Condition 31.2.h at a minimum.
 - (v) Procedures and timeframes for verifying fugitive emission component repairs.
 - (vi) Records that will be kept and the length of time records will be kept.
 - (vii) If you are using optical gas imaging, your plan must also include the elements specified in 40 CFR 60.5397a(c)(7)(i) through (vii).
 - (viii) If you are using Method 21 of appendix A-7 of 40 CFR 60, your plan must also include the elements specified in 40 CFR 60.5397a(c)(8)(i) and (ii). For the purposes of complying with the fugitive emissions monitoring program using Method 21 a fugitive emission is defined as an instrument reading of 500 ppm or greater.

[40 CFR 60.5397a(c)(1) through (8), Subpart OOOOa]
- d. Each fugitive emissions monitoring plan must include the elements specified in Conditions 31.2.d(i) through 31.2.d(iv), at a minimum, as applicable.

[40 CFR 60.5397a(d), Subpart OOOOa]

- (i) Sitemap.
- (ii) A defined observation path that ensures that all fugitive emissions components are within sight of the path. The observation path must account for interferences.
- (iii) If you are using Method 21, your plan must also include a list of fugitive emissions components to be monitored and method for determining location of fugitive emissions components to be monitored in the field (e.g., tagging, identification on a process and instrumentation diagram, etc.).
- (iv) Your plan must also include the written plan developed for all of the fugitive emission components designated as difficult-to-monitor in accordance with 40 CFR 60.5397a(g)(3)(i), and the written plan for fugitive emission components designated as unsafe-to-monitor in accordance with 40 CFR 60.5397a(g)(3)(ii).

[40 CFR 60.5397a(d)(1) through (4), Subpart OOOOa]

- e. Each monitoring survey shall observe each fugitive emissions component, as defined in 40 CFR 60.5430a, for fugitive emissions.

[40 CFR 60.5397a(e), Subpart OOOOa]

- f. For a modified collection of fugitive emissions components at a well site, the initial monitoring survey must be conducted within 60 days of the first day of production for each collection of fugitive emission components after the modification.

[40 CFR 60.5397a(f)(1), Subpart OOOOa]

- g. A monitoring survey of each collection of fugitive emissions components at a well site must be performed at the frequencies specified in Condition 31.2.g(i), with the exceptions noted in Conditions 31.2.g(ii) and 31.2.g(iii).

[40 CFR 60.5397a(g), Subpart OOOOa]

- (i) Except as provided herein, a monitoring survey of each collection of fugitive emissions components at a well site within a company-defined area must be conducted at least semiannually after the initial survey. Consecutive semiannual monitoring surveys must be conducted at least 4 months apart.

[40 CFR 60.5397a(g)(1), Subpart OOOOa]

- (ii) Fugitive emissions components that cannot be monitored without elevating the monitoring personnel more than 2 meters above the surface may be designated as difficult-to-monitor. Fugitive emissions components that are designated difficult-to-monitor must meet the specifications of 40 CFR 60.5397a(g)(3)(i) through (iv).

[40 CFR 60.5397a(g)(3), Subpart OOOOa]

- (iii) Fugitive emissions components that cannot be monitored because monitoring personnel would be exposed to immediate danger while conducting a monitoring survey may be designated as unsafe-to-monitor. Fugitive emissions components that are designated unsafe-to-monitor must meet the specifications of 40 CFR 60.5397a(g)(4)(i) through (iv).

[40 CFR 60.5397a(g)(4), Subpart OOOOa]

- h. Each identified source of fugitive emissions shall be repaired or replaced in accordance with Conditions 31.2.h(i) and 31.2.h(ii).

[40 CFR 60.5397a(h), Subpart OOOOa]

- (i) Each identified source of fugitive emissions shall be repaired or replaced as soon as practicable, but no later than 30 calendar days after detection of the fugitive emissions.
- (ii) If the repair or replacement is technically infeasible, would require a vent blowdown, a compressor station shutdown, a well shutdown or well shut-in, or would be unsafe to repair during operation of the unit, the repair or replacement must be completed during the next scheduled compressor station shutdown, well shutdown, well shut-in, after a planned vent blowdown or within 2 years, whichever is earlier.
- (iii) Each repaired or replaced fugitive emissions component must be resurveyed as soon as practicable, but no later than 30 days after being repaired, to ensure that there are no fugitive emissions.

[40 CFR 60.5397a(h)(1) through (3), Subpart OOOOa]

- (A) For repairs that cannot be made during the monitoring survey when the fugitive emissions are initially found, the operator may resurvey the repaired fugitive emissions components using either Method 21 or optical gas imaging within 30 days of finding such fugitive emissions.
- (B) For each repair that cannot be made during the monitoring survey when the fugitive emissions are initially found, a digital photograph must be taken of that component, or the component must be tagged for identification purposes. The digital photograph must include the date that the photograph was taken, must clearly identify the component by location within the site (e.g., the latitude and longitude of the component or by other descriptive landmarks visible in the picture).
- (C) Operators that use Method 21 to resurvey the repaired fugitive emissions components are subject to the resurvey provisions specified in 40 CFR 60.5397a(h)(3)(iii)(A) and (B).

- (D) Operators that use optical gas imaging to resurvey the repaired fugitive emissions components, are subject to the resurvey provisions specified in 40 CFR 60.5397a(h)(3)(iv)(A) and (B).

[40 CFR 60.5397a(h)(3)(i) through (iv), Subpart OOOOa]

- i. Records for each monitoring survey shall be maintained as specified Condition 31.5.a.
- j. Annual reports shall be submitted for each collection of fugitive emissions components at a well site that include the information specified in Condition 31.4.b. Multiple collection of fugitive emissions components at a well site may be included in a single annual report.

[40 CFR 60.5397a(i) & (j), Subpart OOOOa]

NSPS Subpart OOOOa Continuous Compliance Requirements

- 31.3. For each collection of fugitive emissions components at a well site, you must demonstrate continuous compliance with the fugitive emission standards specified in Condition 31.2 according to Conditions 31.3.a through 31.3.d.

[40 CFR 71.6(a)(3)]

[40 CFR 60.5415a(h), Subpart OOOOa]

- a. You must conduct periodic monitoring surveys as required in Condition 31.2.g.
- b. You must repair or replace each identified source of fugitive emissions as required in Condition 31.2.h.
- c. You must maintain records as specified in Condition 31.5.a.
- d. You must submit annual reports for collection of fugitive emissions components at a well site as required in Conditions 31.4.a and 31.4.b.

[40 CFR 60.5415a(h)(1) through (4), Subpart OOOOa]

NSPS Subpart OOOOa Notification, Reporting, and Recordkeeping Requirements

- 31.4. Reporting requirements. You must submit annual reports containing the information specified in Conditions 31.4.a and 31.4.b. You must submit annual reports following the procedure specified in Condition 31.4.c. The initial annual report is due no later than 90 days after the end of the initial compliance period as determined according to 40 CFR 60.5410a. Subsequent annual reports are due no later than same date each year as the initial annual report. If you own or operate more than one affected facility, you may submit one report for multiple affected facilities provided the report contains all of the information required as specified in Conditions 31.4.a and 31.4.b. Annual reports may coincide with title V reports as long as all the required elements of the annual report are included. You may arrange with the Administrator a common schedule on which reports required by this part may be submitted as long as the schedule does not extend the reporting period.

[40 CFR 71.6(a)(3)]
[40 CFR 60.5420a(b), Subpart OOOOa]

- a. The general information specified in Conditions 31.4.a(i) through 31.4.a(iv) for all reports.

[40 CFR 60.5420a(b)(1), Subpart OOOOa]

- (i) The company name, facility site name associated with the affected facility, US Well ID or US Well ID associated with the affected facility, if applicable, and address of the affected facility. If an address is not available for the site, include a description of the site location and provide the latitude and longitude coordinates of the site in decimal degrees to an accuracy and precision of five (5) decimals of a degree using the North American Datum of 1983.
- (ii) An identification of each affected facility being included in the annual report.
- (iii) Beginning and ending dates of the reporting period.
- (iv) A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

[40 CFR 60.5420a(b)(1)(i) through (iv), Subpart OOOOa]

- b. For the collection of fugitive emissions components at each well site within the company-defined area, the records of each monitoring survey including the information specified in Conditions 31.4.b(i) through 31.4.b(xii).

[40 CFR 60.5420a(b)(7), Subpart OOOOa]

- (i) Date of the survey.
- (ii) Beginning and end time of the survey.
- (iii) Name of operator(s) performing survey. If the survey is performed by optical gas imaging, you must note the training and experience of the operator.
- (iv) Ambient temperature, sky conditions, and maximum wind speed at the time of the survey.
- (v) Monitoring instrument used.
- (vi) Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan.
- (vii) Number and type of components for which fugitive emissions were detected.

- (viii) Number and type of fugitive emissions components that were not repaired as required in Condition 31.2.h.
- (ix) Number and type of difficult-to-monitor and unsafe-to-monitor fugitive emission components monitored.
- (x) The date of successful repair of the fugitive emissions component.
- (xi) Number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair.
- (xii) Type of instrument used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding.

[40 CFR 60.5420a(b)(7)(i) through (xii), Subpart OOOOa]

- c. You must submit reports to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX (<https://cdx.epa.gov/>.) You must use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (<https://www3.epa.gov/ttn/chief/cedri/>). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in 40 CFR 60.4. Once the form has been available in CEDRI for at least 90 calendar days, you must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in Condition 31.4, regardless of the method in which the reports are submitted.

[40 CFR 60.5420a(b)(11), Subpart OOOOa]

- 31.5. Recordkeeping requirements. You must maintain the records identified as specified in 40 CFR 60.7(f) and in Condition 31.5.a. All records required by this condition must be maintained either onsite or at the nearest local field office for at least 5 years. Any records required to be maintained by this condition that are submitted electronically via the EPA's CDX may be maintained in electronic format.

[40 CFR 71.6(a)(3)]

[40 CFR 60.5420a(c), Subpart OOOOa]

- a. For each collection of fugitive emissions components at a well site, the records identified in Conditions 31.5.a(i) and 31.5.a(ii).

[40 CFR 60.5420a(c)(15), Subpart OOOOa]

- (i) The fugitive emissions monitoring plan as required in Conditions 31.2.b, 31.2.c, and 31.2.d.
- (ii) The records of each monitoring survey as specified in Conditions 31.5.a(ii)(A) through 31.5.a(ii)(I).

[40 CFR 60.5420a(c)(15)(i) & (ii), Subpart OOOOa]

- (A) Date of the survey.
- (B) Beginning and end time of the survey.
- (C) Name of operator(s) performing survey. You must note the training and experience of the operator.
- (D) Monitoring instrument used.
- (E) When optical gas imaging is used to perform the survey, one or more digital photographs or videos, captured from the optical gas imaging instrument used for conduct of monitoring, of each required monitoring survey being performed. The digital photograph must include the date the photograph was taken and the latitude and longitude of the collection of fugitive emissions components at a well site or collection of fugitive emissions components at a compressor station imbedded within or stored with the digital file. As an alternative to imbedded latitude and longitude within the digital file, the digital photograph or video may consist of an image of the monitoring survey being performed with a separately operating GPS device within the same digital picture or video, provided the latitude and longitude output of the GPS unit can be clearly read in the digital image.
- (F) Fugitive emissions component identification when Method 21 is used to perform the monitoring survey.
- (G) Ambient temperature, sky conditions, and maximum wind speed at the time of the survey.
- (H) Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan.
- (I) Documentation of each fugitive emission, including the information specified in 40 CFR 60.5420a(c)(15)(ii)(I)(1) through (12).

[40 CFR 60.5420a(c)(15)(ii)(A) through (I), Subpart OOOOa]

- 31.6. Table 3 to NSPS Subpart OOOOa shows which parts of the General Provisions in 40 CFR 60.1 through 60.19 apply to you.

[40 CFR 71.6(a)(1)]
[40 CFR 60.5425a, Subpart OOOOa]

40 CFR 62 Subpart III

32. For EU ID 2, the Permittee shall comply with the following applicable requirements in 40 CFR 62 Subpart III.

[18 AAC 50.040(g)(4), (j)(4) & 50.326(j)]
[40 CFR 71.6(a)(1)]

[40 CFR 62.14510, Subpart III]

- 32.1. 40 CFR 62 Subpart III exempts the type of unit described in Condition 32.1.a from complying with the requirements of 40 CFR 62 Subpart III except for the requirements specified in Condition 32.1.a and in Condition 32.1.b.

[40 CFR 62.14525, Subpart III]

- a. Units that burn greater than 30 percent municipal solid waste or refuse-derived fuel, as defined in 40 CFR part 60 Subpart Ea, Subpart Eb, Subpart AAAA, and Subpart BBBB, and that have the capacity to burn less than 35 tons (32 megagrams) per day of municipal solid waste or refuse-derived fuel, if you meet the two requirements in Conditions 32.1.a(i) and 32.1.a(ii).

[40 CFR 62.14525(c)(2), Subpart III]

- (i) Notify the EPA Administrator and Department that the unit meets these criteria.
- (ii) Keep records on a calendar quarter basis of the weight of municipal solid waste burned, and the weight of all other fuels and wastes burned in the unit.

[40 CFR 62.14525(c)(2)(i) & (ii), Subpart III]

- b. Owners or operators of sources that qualify for the exemption in Condition 32.1.a must submit any records required to support their claims of exemption to the EPA Administrator (or delegated enforcement authority) upon request. Any records required under Condition 32.1.a must be maintained by the source for a period of at least 5 years.

[40 CFR 62.14531, Subpart III]

40 CFR 63 Subpart A

33. NESHAP Subpart A Requirements.

- 33.1. For EU IDs 8 through 14, 23, and 23A, the Permittee shall comply with the applicable requirements of 40 CFR 63 Subpart A in accordance with the provisions for applicability of Subpart A in Table 8 to NESHAP Subpart ZZZZ.

[18 AAC 50.040(j) & 50.326(j)]

[40 CFR 71.6(a)(1)]

[40 CFR 63.6665 & Table 8, Subpart ZZZZ]

- 33.2. For EU IDs 36 and 37, the Permittee shall comply with the applicable requirements of 40 CFR 63 Subpart A in accordance with the provisions for applicability of Subpart A in Table 2 to NESHAP Subpart HH.

[18 AAC 50.040(j) & 50.326(j)]

[40 CFR 71.6(a)(1)]

[40 CFR 63.764(a) & Table 2, Subpart HH]

- 33.3. For EU IDs 38 and 39, the Permittee shall comply with the applicable requirements of 40 CFR 63 Subpart A in accordance with the provisions for applicability of Subpart A in Table 3 to NESHAP Subpart CCCCC.

[18 AAC 50.040(j) & 50.326(j)]
[40 CFR 71.6(a)(1)]
[40 CFR 63.11130 & Table 3, Subpart CCCCCC]

40 CFR 63 Subpart HH

34. For EU IDs 36 and 37, the Permittee shall comply with the following applicable requirements of NESHAP Subpart HH.

[18 AAC 50.040(c)(13), (j)(4) & 50.326(j)]
[40 CFR 71.6(a)(1)]
[40 CFR 63.760(a), Subpart HH]

- 34.1. The owner or operator shall maintain records of the annual facility natural gas or hydrocarbon liquid throughput each year and upon request submit such records to the EPA Administrator and Department. If the facility annual natural gas or hydrocarbon liquid throughput increases above the maximum natural gas or hydrocarbon liquid throughput calculated in 40 CFR 63.760(a)(1)(i)(A) or (a)(1)(i)(B), the maximum natural gas or hydrocarbon liquid throughput must be recalculated using the higher throughput multiplied by a factor of 1.2.

[40 CFR 71.6(a)(1) & (a)(3)(ii)]
[40 CFR 63.760(a)(1)(ii), Subpart HH]

- 34.2. Any source that determines it is not a major source but has actual emissions of 5 tons per year or more of a single HAP, or 12.5 tons per year or more of a combination of HAP (i.e., 50 percent of the major source thresholds), shall update its major source determination within 1 year of the prior determination or October 15, 2012, whichever is later, and each year thereafter, using gas composition data measured during the preceding 12 months.

[40 CFR 71.6(a)(1)]
[40 CFR 63.760(c), Subpart HH]

NESHAP Subpart HH General Standards

- 34.3. Each owner or operator of an area source not located in a UA plus offset and UC boundary (as defined in 40 CFR 63.761) shall comply with Conditions 34.3.a through 34.3.c.

[40 CFR 71.6(a)(1)]
[40 CFR 63.764(d)(2), Subpart HH]

- a. Determine the optimum glycol circulation rate using the equation in 40 CFR 63.764(d)(2)(i).

- b. Operate the TEG dehydration unit such that the actual glycol circulation rate does not exceed the optimum glycol circulation rate determined in accordance with Condition 34.3.a. If the TEG dehydration unit is unable to meet the sales gas specification for moisture content using the glycol circulation rate determined in accordance with Condition 34.3.a, the owner or operator must calculate an alternate circulation rate using GRI-GLYCalc™, Version 3.0 or higher. The owner or operator must document why the TEG dehydration unit must be operated using the alternate circulation rate and submit this documentation with the initial notification in accordance with 40 CFR 63.775(c)(7).
- c. Maintain a record of the determination specified in Condition 34.3.b in accordance with the requirements in 40 CFR 63.774(f) and submit the Initial Notification in accordance with the requirements in 40 CFR 63.775(c)(7). If operating conditions change and a modification to the optimum glycol circulation rate is required, the owner or operator shall prepare a new determination in accordance with 34.3.a or 34.3.b and submit the information specified under 40 CFR 63.775(c)(7)(ii) through (v).

[40 CFR 71.6(a)(3)]
[40 CFR 63.764(d)(2)(i) through (iii), Subpart HH]

- 34.4. The owner or operator of an area source is exempt from the requirements of Condition 34.3 if the criteria listed in Condition 34.4.a or 34.4.b are met, except that the records of the determination of these criteria must be maintained as required in Condition 34.9.

[40 CFR 71.6(a)(1)]
[40 CFR 63.764(e), Subpart HH]

- a. The actual annual average flowrate of natural gas to the glycol dehydration unit is less than 85 thousand standard cubic meters per day, as determined by the procedures specified in Condition 34.6; or
- b. The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagram per year, as determined by the procedures specified in Condition 34.7.

[40 CFR 71.6(a)(3)]
[40 CFR 63.764(e)(1)(i) & (ii), Subpart HH]

- 34.5. At all times the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[40 CFR 71.6(a)(1)]
[40 CFR 63.764(j), Subpart HH]

NESHAP Subpart HH Test Methods, Compliance Procedures, and Compliance Demonstrations

- 34.6. The determination of actual flowrate of natural gas to a glycol dehydration unit shall be made using the procedures of either 40 CFR 63.772(b)(1)(i) or (b)(1)(ii).
- 34.7. The determination of actual average benzene or BTEX emissions from a glycol dehydration unit shall be made using the procedures of either 40 CFR 63.772(b)(2)(i) or (b)(2)(ii). Emissions shall be determined either uncontrolled, or with federally enforceable controls in place.

[40 CFR 71.6(a)(3)]
[40 CFR 63.772(b)(1) & (2), Subpart HH]

NESHAP Subpart HH Recordkeeping Requirements

- 34.8. Each owner or operator of a facility subject to NESHAP Subpart HH shall maintain records as follows:

[40 CFR 71.6(a)(3)(ii)]
[40 CFR 63.774(b), Subpart HH]

- a. The owner or operator of an affected source subject to the provisions of NESHAP Subpart HH shall maintain files of all information (including all reports and notifications) required by NESHAP Subpart HH. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or period.

[40 CFR 63.774(b)(1), Subpart HH]

- (i) All applicable records shall be maintained in such a manner that they can be readily accessed.
- (ii) The most recent 12 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request.
- (iii) The remaining 4 years of records may be retained offsite.
- (iv) Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

[40 CFR 63.774(b)(1)(i) through (iv), Subpart HH]

- 34.9. An owner or operator of a glycol dehydration unit that meets the exemption criteria in Condition 34.4.a or 34.4.b shall maintain the records specified in Condition 34.9.a or 34.9.b, as appropriate, for that glycol dehydration unit.

[40 CFR 71.6(a)(3)(ii)]
[40 CFR 63.774(d)(1), Subpart HH]

- a. The actual annual average natural gas throughput (in terms of natural gas flowrate to the glycol dehydration unit per day) as determined in accordance with Condition 34.6, or

- b. The actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with Condition 34.7.

[40 CFR 63.774(d)(1)(i) & (ii), Subpart HH]

40 CFR 63 Subpart ZZZZ

- 35. For EU IDs 8 through 14, 23, 23A, and 43, the Permittee shall comply with the following applicable requirements of NESHAP Subpart ZZZZ for stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions.

[18 AAC 50.040(c)(23), (j)(4) & 50.326(j)]

[40 CFR 71.6(a)(1)]

[40 CFR 63.6585, 63.6590, & 63.6590(a), Subpart ZZZZ]

- 35.1. For EU ID 43, meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR part 60 subpart JJJJ. No further requirements apply under 40 CFR 63.

[40 CFR 71.6(a)(1)]

[40 CFR 63.6590(c), Subpart ZZZZ]

NESHAP Subpart ZZZZ Emission Limitations, Operating Limitations, and Other Requirements

- 35.2. For EU IDs 8 through 14, the Permittee shall comply with the following:

[40 CFR 71.6(a)(1)]

- a. You must meet the following requirements, except during periods of startup:

- (i) Change oil and filter every 4,320 hours of operation or annually, whichever comes first;
- (ii) Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and
- (iii) Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.

[40 CFR 63.6603(a) & Table 2d, Item 6, Subpart ZZZZ]

- 35.3. For EU IDs 23 and 23A, the Permittee shall comply with the following:

[40 CFR 71.6(a)(1)]

- a. You must meet the following requirements, except during periods of startup:

- (i) Change oil and filter every 1,440 hours of operation or annually, whichever comes first;
- (ii) Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and
- (iii) Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.

[40 CFR 63.6603(a) & Table 2d, Item 10, Subpart ZZZZ]

35.4. For EU IDs 8 through 14, 23, and 23A, the Permittee shall comply with the following:

[40 CFR 71.6(a)(1)]

- a. During periods of startup you must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

[40 CFR 63.6625(h) & Table 2d, Subpart ZZZZ]

- b. You have the option to utilize an oil analysis program as described in 40 CFR 63.6625(j) in order to extend the specified oil change requirement in Conditions 35.2.a(i) and 35.3.a(i).

[40 CFR 63.6625(j) & Table 2d, Subpart ZZZZ]

NESHAP Subpart ZZZZ General Requirements

35.5. For EU IDs 8 through 14, 23, and 23A, the Permittee shall comply with the following:

[40 CFR 71.6(a)(1)]

- a. You must be in compliance with the emission limitations, operating limitations, and other requirements in NESHAP Subpart ZZZZ that apply to you at all times.

[40 CFR 63.6605(a), Subpart ZZZZ]

- b. At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make 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 the source.

[40 CFR 63.6605(b), Subpart ZZZZ]

NESHAP Subpart ZZZZ Monitoring, Installation, Collection, Operation, and Maintenance Requirements

35.6. For EU IDs 8 through 14, 23, and 23A, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

[40 CFR 71.6(a)(1)]

[40 CFR 63.6625(e), Subpart ZZZZ]

NESHAP Subpart ZZZZ Requirements for Demonstration of Continuous Compliance with Emission Limitations, Operating Limitations, and Other Requirements

35.7. For EU IDs 8 through 14, 23, and 23A, the Permittee shall comply with the following:

[40 CFR 71.6(a)(3)]

a. You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Condition 35.2 according to methods specified in Condition 35.7.a(i) or 35.7.a(ii).

[40 CFR 63.6640(a), Subpart ZZZZ]

- (i) Operate and maintain the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or
- (ii) Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

[Table 6, Item 9, Subpart ZZZZ]

b. You must also report each instance in which you did not meet the requirements in Table 8 to NESHAP Subpart ZZZZ that apply to you.

[40 CFR 63.6640(e), Subpart ZZZZ]

NESHAP Subpart ZZZZ Reporting Requirements

35.8. For EU IDs 8 through 14, 23, and 23A, the Permittee must report all deviations as defined in NESHAP Subpart ZZZZ in the semiannual monitoring report required by Condition 72.

[40 CFR 71.6(a)(3)(iii)]

[40 CFR 63.6650(f), Subpart ZZZZ]

NESHAP Subpart ZZZZ Recording Requirements

35.9. For EU IDs 8 through 14, 23, and 23A, the Permittee shall comply with the following:

[40 CFR 71.6(a)(3)(ii)]

a. You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan.

[40 CFR 63.6655(e), Subpart ZZZZ]

b. Your records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1).

[40 CFR 63.6660(a), Subpart ZZZZ]

- c. As specified in 40 CFR 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

[40 CFR 63.6660(b), Subpart ZZZZ]

- d. You must keep each record 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, according to 40 CFR 63.10(b)(1).

[40 CFR 63.6660(c), Subpart ZZZZ]

40 CFR 63 Subpart CCCCCC

- 36. For EU IDs 38 and 39, the Permittee shall comply with the following applicable requirements of NESHAP Subpart CCCCCC.

[18 AAC 50.040(c)(35), 18 AAC 50.040(j)(4) & 50.326(j)(4)]

[40 CFR 71.6(a)(1)]

[40 CFR 63.11111(a) & 63.11111(c), Subpart CCCCCC]

- 36.1. An affected source shall, upon request by the EPA Administrator or the Department, demonstrate that their monthly throughput is less than the 10,000-gallon or the 100,000-gallon threshold level, as applicable.

[40 CFR 71.6(a)(1)]

[40 CFR 63.11111(e), Subpart CCCCCC]

NESHAP Subpart CCCCCC General Requirements

- 36.2. You must, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the EPA Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[40 CFR 71.6(a)(1)]

[40 CFR 63.11115(a), Subpart CCCCCC]

NESHAP Subpart CCCCCC Requirements for Facilities with Monthly Throughput of 10,000 Gallons of Gasoline or More

- 36.3. You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

[40 CFR 71.6(a)(1)]

[40 CFR 63.11116(a) & 63.11117(a), Subpart CCCCCC]

- a. Minimize gasoline spills;
- b. Clean up spills as expeditiously as practicable;

- c. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
- d. Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

[40 CFR 63.11116(a)(1) through (4), Subpart CCCCCC]

- 36.4. You must only load gasoline into storage tanks at your facility by utilizing submerged filling⁶ and as specified in Condition 36.4.a. The distance in Condition 36.4.a shall be measured from the point in the opening of the submerged fill pipe that is the greatest distance from the bottom of the storage tank.

[40 CFR 71.6(a)(1)]

[40 CFR 63.11117(b), Subpart CCCCCC]

- a. Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the tank.

[40 CFR 63.11117(b)(2), Subpart CCCCCC]

- 36.5. You must have records available within 24 hours of a request by the EPA Administrator or Department to document your gasoline throughput.

[40 CFR 71.6(a)(1)]

[40 CFR 63.11117(d), Subpart CCCCCC]

NESHAP Subpart CCCCCC Notifications

- 36.6. You must submit an Initial Notification that you are subject to NESHAP Subpart CCCCCC by May 9, 2008, or at the time you become subject to the control requirements in 40 CFR 63.11117. The Initial Notification must contain the information specified in 40 CFR 63.11124(a)(1)(i) through (iii). The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in 40 CFR 63.13.

[40 CFR 71.6(a)(3)(iii)]

[40 CFR 63.11124(a)(1), Subpart CCCCCC]

⁶ *Submerged filling* means, for the purposes of 40 CFR 63 Subpart CCCCCC, the filling of a gasoline storage tank through a submerged fill pipe whose discharge is no more than the applicable distance specified in 40 CFR 63.11117(b) from the bottom of the tank. Bottom filling of gasoline storage tanks is included in this definition.

- 36.7. You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in 40 CFR 63.13, within 60 days of the applicable compliance date specified in 40 CFR 63.11113(c). The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of NESHAP Subpart CCCCCC, and must indicate whether the facilities' monthly throughput is calculated based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of NESHAP Subpart CCCCCC at the time the Initial Notification required under Condition 36.6 is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under Condition 36.6.

[40 CFR 71.6(a)(3)(iii)]
[40 CFR 63.11124(a)(2), Subpart CCCCCC]

NESHAP Subpart CCCCCC Recordkeeping

- 36.8. Each owner or operator of an affected source under NESHAP Subpart CCCCCC shall keep records as specified in Conditions 36.8.a and 36.8.b.

[40 CFR 71.6(a)(3)(iii)]
[40 CFR 63.11125(d) & 63.11115(b), Subpart CCCCCC]

- a. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
- b. Records of actions taken during periods of malfunction to minimize emissions in accordance with Condition 36.2, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[40 CFR 63.11125(d)(1) & (2), Subpart CCCCCC]

40 C.F.R. Part 61 Subpart A (General Provisions) & Subpart M (Asbestos)

37. **Asbestos NESHAP.** The Permittee shall comply with the requirements set forth in 40 CFR 61.145, 61.150, and 61.152 of Subpart M, and the applicable sections set forth in 40 CFR 61, Subpart A and Appendix A.

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

40 C.F.R. 68 Chemical Accident Prevention Provisions

38. **Risk Management Plan (RMP) Requirements.** The Permittee shall comply with the following requirements of 40 C.F.R. 68:

- 38.1. Submit a compliance schedule for meeting the requirements of 40 C.F.R. 68 by the date provided in 40 CFR 68.10(a) and 68.96(a) and (b)(2)(i); or

- 38.2. As part of the Annual Compliance Certification required by Condition 73, certify compliance with all requirements of 40 C.F.R. 68, including the registration and submission of the RMP.

[18 AAC 50.040(j) & 50.326(j)]
[40 C.F.R. 71.6(a)(3) & (c)(6)]
[40 C.F.R. 68.10(i) and 68.215(a)(2)(i) & (ii), Subpart H]

39. Protection of Stratospheric Ozone, 40 CFR 82

40 CFR 82 Subpart F

- 39.1. **Refrigerant Recycling and Disposal.** The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 CFR 82, Subpart F.

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

40 CFR 82 Subpart G

- 39.2. **Significant New Alternatives Policy.** The Permittee shall comply with the applicable prohibitions set out in 40 CFR 82.174.

[18 AAC 50.040(d)]
[40 CFR 82.174(b) through (d), Subpart G]

40 CFR 82 Subpart H

- 39.3. **Halon Emissions Reduction.** The Permittee shall comply with the applicable prohibitions set out in 40 CFR 82.270.

[18 AAC 50.040(d)]
[40 CFR 82.270(b) through (f), Subpart H]

General NSPS and NESHAP Requirements

40. **NESHAP Applicability Determinations.** The Permittee shall determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 CFR 63) in accordance with the procedures in 40 CFR 63.1(b).

[18 AAC 50.040(c)(1), 50.040(j), & 50.326(j)]

- 40.1. An owner or operator of a stationary source who is in the relevant source category and who determines that the source is not subject to a relevant standard or other requirement established under 40 CFR 63 must keep a record as specified in 40 CFR 63.10(b)(3).

[40 CFR 71.6(a)(3)(ii)]
[40 CFR 63.1(b)(3), Subpart A]

41. If an existing source becomes affected by an applicable subpart of 40 CFR 63, the Permittee shall comply with such standard by the compliance date established by the Administrator in the applicable subpart, in accordance with 40 CFR 63.6(c).

[18 AAC 50.040(c)(1), 50.040(j), & 50.326(j)]

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42. After the effective date of any relevant standard promulgated by the Administrator under 40 CFR 63, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator and the Department of the intended construction or reconstruction. The notification must be submitted in accordance with the procedures in 40 CFR 63.9(b).

[18 AAC 50.040(c)(1), 50.040(j), & 50.326(j)]
[40 CFR 71.6(a)(3)(iii)]
[40 CFR 63.5(b)(4), Subpart A]

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

- 43.1. **Reports:** Except for previously submitted reports and federal reports and notices submitted through EPA's Central Data Exchange (CDX) and Compliance and Emissions Data Reporting Interface (CEDRI) online reporting system, attach to the operating report required by Condition 72 for the period covered by the report, a copy of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10. For reports previously submitted to ADEC or submitted through CDX/CEDRI, state in the operating report the date and a brief description of each of the reports submitted during the reporting period; and
- 43.2. **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 CFR 60.13, 63.10(d) & (f), & 71.6(c)(6)]

Section 5. General Conditions

Standard Terms and Conditions

44. 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)]
45. 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)]
46. 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)]
47. **Administration Fees.** The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-403.
[18 AAC 50.326(j)(1), 50.400 & 50.403]
[AS 37.10.052(b) & AS 46.14.240]
48. **Assessable Emissions.** For each period from July 1 through the following June 30, the Permittee shall pay to the Department an annual emission fee based on the stationary source's assessable emissions, as determined by the Department under 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities 10 tons per year or greater. The quantity for which fees will be assessed is the lesser of the stationary source's
- 48.1. potential to emit of 3,440 tpy; or
- 48.2. projected annual rate of emissions, in tpy, based upon actual annual emissions for the most recent calendar year, or another 12-month period approved in writing by the Department, when demonstrated by credible evidence of actual emissions, based upon the most representative information available from one or more of the following methods:
- a. an enforceable test method described in 18 AAC 50.220;
 - b. material balance calculations;
 - c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
 - d. other methods and calculations approved by the Department, including appropriate vendor-provided emissions factors when sufficient documentation is provided.

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

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

- 49.1. No later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions, as determined in Condition 48.2. Submit actual emissions estimates in accordance with the submission instructions on the Department's Standard Permit Conditions web page at <http://dec.alaska.gov/air/air-permit/standard-conditions/standard-condition-i-submission-instructions/>.
- 49.2. The Permittee shall include with the assessable emissions report all the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates.
- 49.3. If the stationary source has not commenced construction or operation on or before March 31st, the Permittee may submit to the Department's Anchorage office a waiver letter certified under 18 AAC 50.205 that states the stationary source's actual annual emissions for the previous calendar year are zero tpy and provides estimates for when construction or operation will commence.
- 49.4. If no estimate or waiver letter is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit in Condition 48.1.

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

50. Good Air Pollution Control Practice. The Permittee shall do the following for EU IDs 1 and 24 through 33:

- 50.1. perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;
- 50.2. keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and
- 50.3. keep a copy of either the manufacturer's or the operator's maintenance procedures.

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

51. 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)]

52. 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.

[18 AAC 50.045(d), 50.326(j)(3), & 50.346(c)]

- 52.1. The Permittee shall keep records of

- a. complaints received by the Permittee and complaints received by the Department and conveyed to the Permittee; and
- b. any additional precautions that are taken
 - (i) to address complaints described in Condition 52.1 or to address the results of Department inspections that found potential problems; and
 - (ii) to prevent future dust problems.

52.2. The Permittee shall report according to Condition 54.

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

[18 AAC 50.055(g)]

54. 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(j)(4), 50.326(j)(3), & 50.346(a)]
[40 CFR 71.6(a)(3)]

54.1. **Monitoring.** The Permittee shall monitor as follows:

- a. As soon as practicable after becoming aware of a complaint that is attributable to emissions from the stationary source, the Permittee shall investigate the complaint to identify emissions that the Permittee believes have caused or are causing a violation of Condition 54.
- b. The Permittee shall initiate and complete corrective action necessary to eliminate any violation identified by a complaint or investigation as soon as practicable if
 - (i) after an investigation because of a complaint or other reason, the Permittee believes that emissions from the stationary source have caused or are causing a violation of Condition 54; or
 - (ii) the Department notifies the Permittee that it has found a violation of Condition 54.

54.2. **Recordkeeping.** The Permittee shall keep records of

- a. the date, time, and nature of all emissions complaints received;
- b. the name of the person or persons that complained, if known;
- c. a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 54; and

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

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

- a. With each operating report under Condition 72, the Permittee shall include a brief summary report which must include the following for the period covered by the report:
 - (i) the number of complaints received;
 - (ii) the number of times the Permittee or the Department found corrective action necessary;
 - (iii) the number of times action was taken on a complaint within 24 hours; and
 - (iv) the status of corrective actions the Permittee or Department found necessary that were not taken within 24 hours.
- b. The Permittee shall notify the Department of a complaint that is attributable to emissions from the stationary source within 24 hours after receiving the complaint, unless the Permittee has initiated corrective action within 24 hours of receiving the complaint.
- c. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 71.

55. Technology-Based Emission Standard. If an unavoidable emergency, malfunction (as defined in 18 AAC 50.235(d)), or non-routine repair (as defined in 18 AAC 50.990(64)), causes emissions in excess of a technology-based emission standard⁷ listed in Condition 39.1 (refrigerants),

- 55.1. take all reasonable steps to minimize levels of emissions that exceed the standard, and
- 55.2. report in accordance with Condition 62; the report must include information on the steps taken to mitigate emissions and corrective measures taken or to be taken.

[18 AAC 50.235(a), 50.326(j)(4), & 50.040(j)(4)]
[40 CFR 71.6(c)(6)]

Open Burning Requirements

56. Open Burning. If open burning is conducted at this stationary source, comply with the requirements of 18 AAC 50.065.

⁷ *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 CFR 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.

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- 56.1. Keep written records to demonstrate compliance with the requirements of 18 AAC 50.065. Upon request by the Department, submit copies of the records.
 - 56.2. Include this condition in the annual certification required under Condition 73.

[18 AAC 50.065, 50.040(j), & 50.326(j)]

[40 CFR 71.6(a)(3)]

Section 6. General Source Testing and Monitoring Requirements

57. 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)]

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

[18 AAC 50.220(b)]

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

58.2. 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.

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

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

[18 AAC 50.220(c)(1)(A) & 50.040(a)]
[40 CFR 60]

59.2. 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 CFR 61.

[18 AAC 50.040(b) & 50.220(c)(1)(B)]
[40 CFR 61]

59.3. 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 CFR 63.

[18 AAC 50.040(c) & 50.220(c)(1)(C)]
[40 CFR 63]

59.4. 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 and the form in Section 13 may be used to record data.

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

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- 59.5. 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 CFR 60, Appendix A.
- [18 AAC 50.040(a)(3) & 50.220(c)(1)(E)]
[40 CFR 60, Appendix A]
- 59.6. Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 CFR 51, Appendix M, Methods 201 or 201A and 202.
- [18 AAC 50.035(b)(2) & 50.220(c)(1)(F)]
[40 CFR 51, Appendix M]
- 59.7. Source testing for emissions of any pollutant may be determined using an alternative method approved by the Department in accordance with 40 CFR 63 Appendix A, Method 301.
- [18 AAC 50.040(c)(32) & 50.220(c)(2)]
[40 CFR 63, Appendix A, Method 301]
- 60. 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)]
- 61. Test Exemption.** The Permittee is not required to comply with Conditions 63, 64 and 65 when the exhaust is observed for visible emissions by Method 9.
- [18 AAC 50.345(a)]
- 62. 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)]
- 63. Test Plans.** Except as provided in Condition 61, 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 57 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)]

64. Test Notification. Except as provided in Condition 61, 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)]

65. Test Reports. Except as provided in Condition 61, within 60 days after completing a source test, the Permittee shall submit one certified copy of the results in the format set out in the *Source Test Report Outline*, adopted by reference in 18 AAC 50.030. The Permittee shall certify the results in the manner set out in Condition 68. 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)]

66. Particulate Matter Calculations. In source testing for compliance with the particulate matter standards in Conditions 7 and 27.2, 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

67. 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 50.040(a)(1) & 50.326(j)]
[40 C.F.R. 60.7(f), Subpart A, 40 C.F.R. 71.6(a)(3)(ii)(A) and (B)]

- 67.1. Copies of all reports and certifications submitted pursuant to this section of the permit; and
- 67.2. 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

68. 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.

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

[18 AAC 50.345(a) & (j), 50.205, 50.326(j)(3), & 50.346(b)(10)]

69. Submittals. Unless otherwise directed by the Department or this permit, the Permittee shall submit to the Department one certified copy of reports, compliance certifications, and/or other submittals required by this permit. The Permittee may submit the documents electronically or by hard copy.

69.1. Submit the certified copy of reports, compliance certifications, and/or other submittals in accordance with the submission instructions on the Department's Standard Permit Conditions web page at <http://dec.alaska.gov/air/air-permit/standard-conditions/standard-condition-xvii-submission-instructions/>.

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

70. 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 CFR 71.5(a)(2) & 71.6(a)(3)]

71. Excess Emissions and Permit Deviation Reports. The Permittee shall report excess emissions and permit deviations as follows:

71.1. **Excess Emissions Reporting.** Except as provided in Condition 54, the Permittee shall report all emissions or operations that exceed emissions standards or limits of this permit, as follows:

- a. In accordance with 18 AAC 50.240(c), as soon as possible, report
 - (i) excess emissions that present a potential threat to human health or safety; and
 - (ii) excess emissions that the Permittee believes to be unavoidable.
- b. In accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or nonroutine repair that causes emissions in excess of a technology-based emission standard.
- c. If a continuous or recurring excess emissions is not corrected within 48 hours of discovery, report within 72 hours of discovery unless the Department provides written permission to report under Condition 71.1.d.
- d. Report all other excess emissions not described in Conditions 71.1.a, 71.1.b, and 71.1.c within 30 days after the end of the month during which the excess emissions occurred or as part of the next routine operating report in Condition 72 for excess emissions that occurred during the period covered by the report, whichever is sooner.

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

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

71.2. **Permit Deviations Reporting.** For permit deviations that are not “excess emissions,” as defined under 18 AAC 50.990:

- a. Report according to the required deadline for failure to monitor, as specified in other applicable conditions of this permit (Condition 5.2.b).
- b. Report all other permit deviations within 30 days after the end of the month during which the deviation occurred or as part of the next routine operating report in Condition 72 for permit deviations that occurred during the period covered by the report, whichever is sooner.

[18 AAC 50.326(j)(3) & 50.346(b)(2)]

71.3. **Notification Form.** 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 the Division of Air Quality’s Air Online Services (AOS) system webpage Permittee Portal option, <http://dec.alaska.gov/applications/air/airtoolsweb>, or, if the Permittee prefers, the form contained in Section 15 of this permit. The Permittee must provide all information called for by the form that is used. Submit the report in accordance with the submission instructions on the Department’s Standard Permit Conditions webpage found at <http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-iii-and-iv-submission-instructions/>.

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

72. **Operating Reports.** During the life of this permit⁸, the Permittee shall submit to the Department an operating report in accordance with Conditions 68 and 69 by August 1 for the period January 1 to June 30 of the current year and by February 1 for the period July 1 to December 31 of the previous year.

72.1. 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.

72.2. When excess emissions or permit deviations that occurred during the reporting period are not included with the operating report under Condition 72.1, the Permittee shall identify

- a. the date of the excess emissions or permit deviation;
- b. the equipment involved;
- c. the permit condition affected;

⁸ *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.

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- d. a description of the excess emissions or permit deviation; and
 - e. any corrective action or preventive measures taken and the date(s) of such actions; or
- 72.3. When excess emissions or permit deviation reports have already been submitted under Condition 71 during the period covered by the operating report, the Permittee shall either
- a. include a copy of those excess emissions or permit deviation reports with the operating report; or
 - b. cite the date(s) of those reports.
- 72.4. The operating report must include, for the period covered by the report, a listing of emissions monitored under Conditions 3.2.e and 8.1 which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report:
- a. the date of the emissions;
 - b. the equipment involved;
 - c. the permit condition affected; and
 - d. the monitoring result which triggered the additional monitoring.
- 72.5. **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)(3)]
[40 CFR 71.6(a)(3)(iii)(A)]
73. **Annual Compliance Certification.** Each year by March 31, the Permittee shall compile and submit to the Department an annual compliance certification report⁹.
- 73.1. 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;

⁹ See Conditions 73.2 and 73.3 for clarification on the number of reports required.

73.2. **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.

73.3. In addition, submit a copy of the report directly to the Clean Air Act Compliance Manager, US EPA Region 10, Mail Stop: OCE-101, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101.

[18 AAC 50.205, 50.345(a) & (j), & 50.326(j)]
[40 CFR 71.6(c)(5)]

74. Emission Inventory Reporting. The Permittee shall submit to the Department reports of actual emissions for the previous calendar year, by emission unit, of CO, NH₃, NO_x, PM₁₀, PM_{2.5}, SO₂, VOC, and lead (Pb) and lead compounds, as follows:

74.1. **Every-year inventory.** Each year by April 30, if the stationary source's potential to emit for the previous calendar year equals or exceeds:

- a. 250 tons per year (tpy) of NH₃, PM₁₀, PM_{2.5} or VOC; or
- b. 2,500 tpy of CO, NO_x or SO₂.

74.2. **Triennial inventory.** Every third year by April 30, if the stationary source's potential to emit (except actual emissions for Pb) for the previous calendar year equals or exceeds:

- a. For stationary sources located in Attainment and Unclassifiable Areas:
 - (i) 0.5 tpy of actual Pb, or
 - (ii) 1,000 tpy of CO; or
 - (iii) 100 tpy of SO₂, NH₃, PM₁₀, PM_{2.5}, NO_x or VOC.
- b. For stationary sources located in Nonattainment Areas:
 - (i) 0.5 tpy of actual Pb; or
 - (ii) 1,000 tpy of CO or, when located in a CO nonattainment area, 100 tpy of CO; or
 - (iii) 100 tpy of SO₂, NH₃, PM₁₀, PM_{2.5}, NO_x, or VOC; or as specified in Conditions 74.2.b(iv) through 74.2.b(viii);
 - (iv) 70 tpy of SO₂, NH₃, PM_{2.5}, NO_x, or VOC in PM_{2.5} serious nonattainment; or
 - (v) 70 tpy of PM₁₀ in PM₁₀ serious nonattainment areas; or
 - (vi) 50 tpy of NO_x or VOC in O₃ serious nonattainment areas; or
 - (vii) 25 tpy of NO_x or VOC in O₃ severe nonattainment areas; or

(viii) 10 tpy of NO_x or VOC O₃ extreme nonattainment areas.

- 74.3. For reporting under Condition 74.2, the Permittee shall report the annual emissions and the required data elements under Condition 74.4 every third year for the previous calendar year as scheduled by the EPA.¹⁰
- 74.4. For each emissions unit and the stationary source, include in the report the required data elements¹¹ contained within the form included in the Emission Inventory Instructions available at the Department's Air Online Services (AOS) system on the Point Source Emission Inventory webpage at <http://dec.alaska.gov/Applications/Air/airtoolsweb/PointSourceEmissionInventory>.
- 74.5. Submit the report in accordance with the submission instructions on the Department's Standard Permit Conditions webpage at <http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-xv-and-xvi-submission-instructions/>.

[18 AAC 50.040(j)(4), 50.326(j)(3), 50.346(b)(8), & 18 AAC 50.200]
[40 CFR 51.15, 51.30(a)(1) & (b)(1); & 40 CFR 51, Appendix A to Subpart A]

¹⁰ The calendar years for which reports are required are based on the triennial reporting schedule in 40 CFR 51.30(b)(1), which requires states to report emissions data to the EPA for inventory years 2011, 2014, 2017, 2020, and every 3rd year thereafter. Therefore, the Department requires Permittees to report emissions data for the same inventory years by April 30 of the following year (e.g., triennial emission inventory report for 2020 is due April 30, 2021, triennial emission inventory report for 2023 is due April 30, 2024, etc.).

¹¹ The required data elements to be reported to the EPA are outlined in 40 CFR 51.15 and Tables 2a and 2b to Appendix A of 40 CFR 51 Subpart A.

Section 8. Permit Changes and Renewal

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

75.1. 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;

75.2. The information shall be submitted to: Part 70 Operating Permit Program, US EPA Region 10, Mail Stop: OAW-150, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101.

75.3. 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

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

[18 AAC 50.040(j)(7), 50.326(a) & (j)(3), & 50.346(b)(7)]
[40 CFR 71.10(d)(1)]

76. 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 CFR 71.6(a)(8)]

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

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

77.2. 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;

77.3. The change shall not qualify for the shield under 40 CFR 71.6(f);

77.4. 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 CFR 71.6(a)(12)]

78. Operational Flexibility. CAA Section 502(b)(10)¹² changes may be made within the permitted stationary source without 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): Provided, that the Permittee provides EPA and the Department with written notification no less than seven days in advance of the proposed change.

78.1. For each such change, the written notification required by Condition 78 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.

78.2. The permit shield described in 40 CFR 71.6(f) shall not apply to any change made pursuant to Condition 78.

[18 AAC 50.040(j)(4) & 50.326(j)]
[40 CFR 71.6(a)(13)]

79. Permit Renewal. To renew this permit, the Permittee shall submit to the Department¹³ an application under 18 AAC 50.326 no sooner than January 8, 2024 and no later than January 8, 2025. The renewal application shall be complete before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the stationary source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 CFR 71.7(b) and 71.5(a)(1)(iii).

[18 AAC 50.040(j)(3), 50.326(c)(2) & (j)(2)]
[40 CFR 71.5(a)(1)(iii) & 71.7(b) & (c)(1)(ii)]

¹² As defined in 40 CFR 71.2, Section 502(b)(10) changes are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

¹³ Submit permit applications to the Department's Anchorage office. The current address is: Air Permit Intake Clerk, ADEC, 555 Cordova Street, Anchorage, AK 99501.

Section 9. Compliance Requirements

General Compliance Requirements

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

80.1. included and specifically identified in the permit; or

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

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

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

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

81.2. 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), 326(j) & 50.345(a) & (c)]

[40 CFR 71.6(c)(3) & 71.5(c)(8)(iii)(A)]

82. 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)]

83. 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

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

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

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

83.4. 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)]

- 84.** 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 CFR 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.

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

- 85.1. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section; or
- 85.2. 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 CFR 71.6(f)(3)(i) & (ii)]

86. Table B identifies the emission units that are not subject to the specified requirements at the time of permit issuance. If any of the requirements listed in Table B becomes 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 or minor permit and/or an operating permit modification or amendment, as necessary.

[18 AAC 50.326(j)]
 [40 CFR 71.6(f)(1)(ii)]

Table B - Permit Shields Granted

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
1, 42a	40 CFR 60 Subpart D	EU IDs 1 and 42a are less than 250 MMBtu/hr heat input and thus not subject to this subpart per §60.40(a).
1	40 CFR 60 Subpart Da	EU ID 1 commenced construction prior to September 18, 1978 (§60.40Da(a)(2)).
42a	40 CFR 60 Subpart Da	EU ID 42a is less than 250 MMBtu/hr heat input and thus not subject to this subpart per §60.40Da(a)(1).
1	40 CFR 60 Subpart Db	EU ID 1 commenced construction prior to June 19, 1984 (§60.40b(a)).
42a	40 CFR 60 Subpart Db	EU ID 42a is less than 100 MMBtu/hr heat input and thus not subject to this subpart per §60.40b(a).
1, 42a	40 CFR 60 Subpart Dc	EU IDs 1 and 42a are less than 10 MMBtu/hr (§60.40c(a)).
2	40 CFR 60 Subpart E	EU ID 2 does not have the capacity to burn more than 50 tons per day (§60.50(a)).
2	40 CFR 60 Subparts Ec	EU ID 2 is not designated as a hospital/medical/infectious waste unit.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
Storage Vessels Other Than Tank 22	40 CFR 60 Subpart K, Ka, and Kb	All storage vessels for petroleum liquids and volatile organic liquids at this stationary source were constructed, reconstructed, or modified prior to June 11, 1973. Therefore, the requirements of Subparts K, Ka, and Kb do not apply. The permit shields for Subparts K, Ka, and Kb only apply to the currently installed units until modified, reconstructed, or replaced.
Tank 22	40 CFR 60 Subpart K, Ka, and Kb	Tank 22 commenced construction after July 23, 1984. Therefore, the requirements of NSPS Subparts K and Ka do not apply. Tank 22 is also a “process tank,” not a “storage vessel,” and is thus exempt from NSPS Subpart Kb.
Stationary Source-wide	40 CFR 60 Subpart KKK	Swanson River Field is not currently engaged in “the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both” (i.e., is not a natural gas processing plant as defined at 40 CFR 60.631). Therefore, the requirements of this rule do not apply to this stationary source. This shield only applies, however, to the extent that Swanson River Field does not engage in these operations.
Stationary Source-wide	40 CFR 60 Subpart LLL	Pursuant to 40 CFR 60.640, affected equipment includes each sweetening unit, and each sweetening unit followed by a sulfur recovery unit. This stationary source does not have any sweetening units. Therefore, the requirements of Subpart LLL do not apply.
2	40 CFR 60 Subpart AAAA	EU ID 2 is not designated as a small municipal waste combustion unit
2	40 CFR 60 Subpart CCCC	EU ID 2 commenced construction prior to November 30, 1999.
2	40 CFR 60 Subpart EEEE	EU ID 2 commenced construction prior to December 9, 2004 and has not been reconstructed.
43	40 CFR 60 Subpart IIII	EU ID 43 is a spark-ignition engine and not a compression-ignition engine as required by 40 CFR 4200(a).
8 through 14, 23, 23A	40 CFR 60 Subpart JJJJ	Engines constructed prior to June 12, 2006 and have not been modified or reconstructed after this date.
40, 41	40 CFR 60 Subpart JJJJ	EU IDs 40 and 41 commenced construction prior to the July 1, 2008 applicability date for gasoline-fired engines less than 500 hp.
Stationary Source-wide	40 CFR 61 Subpart J	Stationary source does not contain any equipment in benzene service.
Stationary Source-wide	40 CFR 61, Subpart V	Per 40 CFR 61.240(b), a facility must be subject to a specific subpart of 40 CFR 61 to be subject to this subpart.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
Stationary Source-wide	40 CFR 63 Subpart R	40 CFR 63 Subpart R applies to bulk gasoline terminals and pipeline breakout stations located at a major source of HAPs. This stationary source is not a major source of HAPs. Therefore, the requirements of Subpart R do not apply.
36, 37	40 CFR 63 Subpart HH, §§63.762, 63.765, 63.766, 63.769, 63.771, 63.772 [except (b)], 63.774 [except (a), (b)(1), (b)(2), (d), and (f)], 63.775 [except (a), (c)(1), (d)(7), (d)(9), (d)(10), and (f)]	The compressor site at the Swanson River Field is an area source of HAPs emissions not located within an UA offset plus UC boundary.
Stationary Source-wide	40 CFR 63 Subpart HHH	Stationary source is not a “major source” of HAPs as defined in 40 CFR 63.1271.
Stationary Source-wide	40 CFR 63 Subpart EEEE	This stationary source is exempt from the requirements of Subpart EEEE under 40 CFR 63.2334(c)(1).
8 through 14, 23, 23A, 40, 41	40 CFR 63 Subpart ZZZZ, §§63.6600, 63.6601, 63.6602, 63.6610, & 63.6611	Swanson River Field is not a major source of HAPs.
8 through 14	40 CFR 63 Subpart ZZZZ, §§63.6603(b) – (e), 63.6604, 63.6612, 63.6615, 63.6620, 63.6625(a) – (d), (f), (i), 63.6630(c), (d), (e), 63.6635, 63.6640(c), (d), (f), 63.6645, 63.6650(a) – (e), (g) – (i), 63.6655(a) – (d), (f)	Engines are not subject to any numerical emission limits, are 2SLB engines, are greater than 500 horsepower, and are non-emergency engines.
23, 23A	40 CFR 63 Subpart ZZZZ, §§63.6603(b) – (e), 63.6604, 63.6612, 63.6615, 63.6620, 63.6625(a) – (d), (f), (g), (i), 63.6630(c), (d), (e), 63.6635, 63.6640(c), (d), (f), 63.6645, 63.6650(a) – (e), (g) – (i), 63.6655(a) – (d), (f)	Engines are not subject to any numerical emission limits, are not CI engines, are less than 500 horsepower, and are non-emergency engines.
Stationary Source-wide	40 CFR 63 Subpart DDDDD	This stationary source is not a “major source” of HAPs as defined in 40 CFR 63.2.
Pipe and Supply Yard	40 CFR 63 Subpart GGGGG	The Pipe and Supply Yard is not subject to 40 CFR 63 Subpart GGGGG because it does not meet the criteria under 40 CFR 63.7881(a)(3).
Stationary Source-wide	40 CFR 63 Subpart BBBB	40 CFR 63 Subpart BBBB applies to gasoline storage tanks, gasoline loading racks, vapor collection-equipped cargo tanks, and equipment components in vapor or liquid gasoline service at a Gasoline Distribution Bulk Terminal, Bulk Plant, or Pipeline Facilities that meets the criteria specified in Tables 1 through 3 of this subpart. This stationary source is not a Gasoline Distribution Bulk Terminal, Bulk Plant, or Pipeline Facility. Therefore, the requirements of Subpart BBBB do not apply.

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
38, 39	40 CFR 63 Subpart CCCCCC, §§63.11118, 63.11120, 63.11126	Each Gasoline Dispensing Facility (GDF) has a gasoline throughput of less than 100,000 gallons per month. The reporting provisions do not apply to GDFs with a gasoline throughput of less than 100,000 gallons per month. The Subpart CCCCCC permit shields are applicable only if the gasoline throughput for each GDF is less than 100,000 gallons per month.
38, 39	40 CFR 63 Subpart CCCCCC, §63.11117(b)(1) & (b)(3)	Submerged filled pipes were installed at each GDF after November 9, 2006.
38, 39	40 CFR 63 Subpart CCCCCC, §63.11117(c)	Hilcorp does not operate any gasoline tanks less than 250 gallons at Swanson River.
Drill Rig Boilers	40 CFR 63 Subpart JJJJJ	Exempted by 40 CFR 63.11195(h) because rig boilers are temporary as defined in 40 CFR 63.11237.
1, 42a	40 CFR 63 Subpart JJJJJ	EU IDs 1 and 42a fire only gas (§63.11195(e)).
Stationary Source-wide	40 CFR 82.30, Subpart B – Servicing of Motor Vehicle Air Conditioners	Stationary source does not service motor vehicle air conditioners.
2	18 AAC 50.050(b)	The incinerator has a capacity of less than 1,000 lbs/hr. There are no other incinerators within the stationary source.

Section 12. Approved Drilling Rigs¹⁴

Equipment Type	Drilling Rig								
	Nabors 160 ¹			Inlet Drilling CC-1			Nordic 5		
	Equipment	Rating	Units	Equipment	Rating	Units	Equipment	Rating	Units
Engines	Cat D-398	800	kW	Cat 3408	275	kW	Cat 3406	340	kW
	Cat D-398	800	kW	Cat 3408	275	kW	Cat 3406	340	kW
	Cat D-398	800	kW	HMI	350	kW	Cat 3408	340	kW
	Cat D-398	800	kW	Cat 3408	275	kW	Cat 3412	560	kW
	Cat 3306	120	kW	Cat 3408	275	kW	KVA	75	kW
				Cat 3406 or DD 60	340 or 350	kW	Cat 3406 or DD 60	340 or 350	kW
Boilers and Heaters	Boiler	6.69	MMBtu/hr	Boiler	3.3	MMBtu/hr	Boiler	2.0	MMBtu/hr
	Boiler	6.69	MMBtu/hr	Heater	4.0	MMBtu/hr	Boiler	2.0	MMBtu/hr
	Heater	4.2	MMBtu/hr						
Test Flare	Flare	300	MMscf/yr	Flare	300	MMscf/yr	Flare	300	MMscf/yr

¹ Nabors 160 is the previously modeled drill rig. Modeled emissions were based on AP-42 emission factors.

Equipment Type	Drilling Rig								
	Drillers 6TD			Nabors 129 or 130			Marathon Glacier		
	Equipment	Rating	Units	Equipment	Rating	Units	Equipment	Rating	Units
Engines	DD 2000	634	kW	Cat 3412	656	kW	Cat 3406	340	kW
	DD 2000	634	kW	Cat 3412	560	kW	Cat 3406	340	kW
	DD 60	475	kW	Cat 3412	560	kW	Cat 3406	340	kW
	Deere	40	kW	Cat 3406	388	kW	Cat 3406	340	kW
	Cat 3406	340	kW	Cat 3306	239	kW	Cat 3406	340	kW
	Cat 3406 or DD 60	340 or 350	kW	Cat 3406 or DD 60	340 or 350	kW	Cat 3406 or DD 60	340 or 350	kW
Boilers and Heaters	Boiler	2.7	MMBtu/hr	Boiler	3.3	MMBtu/hr	Boiler	3.3	MMBtu/hr
				Heater	3.5	MMBtu/hr			
Test Flare	Flare	300	MMscf/yr	Flare	300	MMscf/yr	Flare	300	MMscf/yr

¹⁴ The approved drill rigs in Section 12 from the Cook Inlet Onshore Drilling and Well Testing Program Rig Units are part of the stationary source (i.e., Swanson River Field).

Equipment Type	Drilling Rig					
	AWS #1			Kuukpik #5		
	Equipment	Rating	Units	Equipment	Rating	Units
Engines	DD 60	354	kW	DDEC IV	634	kW
				DDEC IV	634	kW
				DD 60	450	kW
				DD 60	450	kW
				Unknown	75	kW
Boilers and Heaters	Heater	1.0	MMBtu/hr	Boiler	3.5	MMBtu/hr
	Heater	1.0	MMBtu/hr	Boiler	3.5	MMBtu/hr
	Heater	3.5	MMBtu/hr	Heater	3.5	MMBtu/hr
Test Flare	Flare	300	MMscf/yr	Flare	300	MMscf/yr

Equipment Type	Drilling Rig		
	Generic Drill Rig		
	Equipment	Rating	Units
Engines	Engines	Total kW \leq 3,320 (Nabors 160 total kW)	kW
Boilers and Heaters	Boilers and Heaters	Total MMBtu/hr \leq 17.58 (Nabors 160 total MMBtu/hr)	MMBtu/hr
Test Flare	Flare	Total MMscf/yr \leq 300 (Nabors 160 total MMscf/yr)	MMscf/yr

Section 13. 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 from Stationary Sources.” Temporal changes in emission color, plume water droplet content, background color, sky conditions, observer position, etc. should be noted in the comments section adjacent to each minute of readings. Any information not dealt with elsewhere on the form should be noted under additional information. Following are brief descriptions of the type of information that needs to be entered on the form: for a more detailed discussion of each part of the form, refer to “Instructions for Use of Visible Emission Observation Form” (a copy is available at <https://www3.epa.gov/ttnemc01/methods/webinar8.pdf>).

- Source Name: full company name, parent company or division or subsidiary information, if necessary.
- Address: street (not mailing or home office) address of facility where visible emissions observation is being made.
- Phone (Key Contact): number for appropriate contact.
- Stationary Source ID Number: number from NEDS, agency file, etc.
- Process Equipment, Operating Mode: brief description of process equipment (include type of facility) and operating rate, % capacity, and/or mode (e.g. charging, tapping, shutdown).
- Control Equipment, Operating Mode: specify type of control device(s) and % utilization, control efficiency.
- Describe Emission Point: for identification purposes, stack or emission point appearance, location, and geometry; and whether emissions are confined (have a specifically designed outlet) or unconfined (fugitive).
- Height Above Ground Level: stack or emission point height relative to ground level; can use engineering drawings, Abney level, or clinometer.
- Height Relative to Observer: indicate height of emission point relative to the observation point.
- Distance from Observer: distance to emission point; can use rangefinder or map.
- Direction from Observer: direction plume is traveling from observer.
- Describe Emissions and Color: include physical characteristics, plume behavior (e.g., looping, lacy, condensing, fumigating, secondary particle formation, distance plume visible, etc.), and color of emissions (gray, brown, white, red, black, etc.). Note color changes in comments section.
- Visible Water Vapor Present?: check “yes” if visible water vapor is present.
- If Present, note in the Comments column whether the plume is “attached” if water droplet plume forms prior to exiting stack, or “detached” if water droplet plume forms after exiting stack.
- Point in Plume at Which Opacity was Determined: describe physical location in plume where readings were made (e.g., 1 ft above stack exit or 10 ft. after dissipation of water plume).
- Describe Plume Background: object plume is read against, include texture and atmospheric conditions (e.g., hazy).
- Background Color: sky blue, gray-white, new leaf green, etc.
- Sky Conditions: indicate color of clouds and cloud cover by percentage or by description (clear, scattered, broken, overcast).
- Wind Speed: record wind speed; can use Beaufort wind scale or hand-held anemometer to estimate.
- Wind Direction From: direction from which wind is blowing; can use compass to estimate to eight points.
- Ambient Temperature: in degrees Fahrenheit or Celsius.
- Wet Bulb Temperature: can be measured using a sling psychrometer
- RH Percent: relative humidity measured using a sling psychrometer; use local US Weather Bureau measurements only if nearby.
- Source Layout Sketch: include wind direction, sun position, associated stacks, roads, and other landmarks to fully identify location of emission point and observer position.
- Draw North Arrow: to determine, point line of sight in direction of emission point, place compass beside circle, and draw in arrow parallel to compass needle.
- Sun’s Location: point line of sight in direction of emission point, move pen upright along sun location line, mark location of sun when pen’s shadow crosses the observer’s position.
- Observation Date: date observations conducted.
- Start Time, End Time: beginning and end times of observation period (e.g., 1635 or 4:35 p.m.).
- Data Set: percent opacity to nearest 5%; enter from left to right starting in left column. Use a second (third, etc.) form, if readings continue beyond 30 minutes. Use dash (-) for readings not made; explain in adjacent comments section.
- Comments: note changing observation conditions, plume characteristics, and/or reasons for missed readings.
- Range of Opacity: note highest and lowest opacity number.
- Observer’s Name: print in full.
- Observer’s Signature, Date: sign and date after performing VE observation.
- 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									
Stationary Source Name		Type of Emission Unit		Observation Date		Start Time		End Time	
				Sec	0	15	30	45	Comments
Emission Unit Location				Min					
City				1					
State		Zip		2					
Phone # (Key Contact)		Stationary Source ID Number		3					
Process Equipment		Operating Mode		4					
Control Equipment		Operating Mode		5					
Describe Emission Point/Location				6					
Height above ground level	Height relative to observer	Clinometer Reading		7					
Distance From Observer		Direction From Observer		8					
Start	End	Start	End	9					
Describe Emissions & Color				10					
Start	End			11					
Visible Water Vapor Present? If yes, determine approximate distance from the stack exit to where the plume was read				12					
No	Yes			13					
Point in Plume at Which Opacity Was Determined				14					
Describe Plume Background		Background Color		15					
Start	End	Start	End	16					
Sky Conditions:				17					
Start	End			18					
Wind Speed		Wind Direction From		19					
Start	End	Start	End	20					
Ambient Temperature		Wet Bulb Temp	RH percent	21					
SOURCE LAYOUT SKETCH: 1 Stack or Point Being Read 2 Wind Direction From				22					
3 Observer Location	4 Sun Location	5 North Arrow	6 Other Stacks	23					
				24					
				25					
				26					
				27					
				28					
				29					
				30					
Range of Opacity				Minimum	Maximum				
I have received a copy of these opacity observations				Print Observer's Name					
Print Name:				Observer's Signature				Date	
Signature:				Certifying Organization				Observer's Affiliation:	
Title		Date		Certified By:				Date	
Data Reduction:									
Duration of Observation Period (minutes):				Duration Required by Permit (minutes):					
Number of Observations:				Highest Six-Minute Average Opacity (%):					
Number of Observations exceeding 20%:				Highest 18-Consecutive-Minute Average Opacity %(engines and turbines only)					
In compliance with six-minute opacity limit? (Yes or No)									
Average Opacity Summary:									
Set Number	Time		Opacity		Sum	Average	Comments		
	Start	End							

Section 14. 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 SO₂ using the following equations:

$$\begin{aligned}
 \text{A.} &= 31,200 \times [\text{wt}\%S_{\text{fuel}}] = 31,200 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{B.} &= 0.148 \times [\text{wt}\%S_{\text{fuel}}] = 0.148 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{C.} &= 0.396 \times [\text{wt}\%C_{\text{fuel}}] = 0.396 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{D.} &= 0.933 \times [\text{wt}\%H_{\text{fuel}}] = 0.933 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{E.} &= B + C + D = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{F.} &= 20.9 - [\text{vol}\%_{\text{dry}}O_{2, \text{exhaust}}] = 20.9 - \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{G.} &= [\text{vol}\%_{\text{dry}}O_{2, \text{exhaust}}] \div F = \underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{H.} &= 1 + G = 1 + \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{I.} &= E \times H = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \\
 \text{SO}_2 \text{ concentration} &= A \div I = \underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}} \text{ ppm}
 \end{aligned}$$

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 Condition 12. 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 CFR 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 15. ADEC Notification Form¹⁵

Swanson River Field

AQ0059TVP03

Stationary Source Name

Air Quality Permit No.

Hilcorp Alaska, LLC

Company Name

When did you discover the Excess Emissions/Permit Deviation?

Date: _____ / _____ / _____

Time: _____ :/ _____

When did the event/deviation occur?

Begin: Date: _____ / _____ / _____ Time: _____ : _____ (please use 24-hr clock)

End: Date: _____ / _____ / _____ Time: _____ : _____ (please use 24-hr clock)

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

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

Excess Emissions – Complete Section 1 and Certify

Note: All “excess emissions” are also “permit deviations.” However, use only Section 1 for events that involve excess emissions.

Deviation from Permit Condition – Complete Section 2 and Certify

Note: Use only Section 2 for permit deviations that do not involve excess emissions.

Deviations from COBC¹⁶, CO¹⁷, or Settlement Agreement – Complete Section 2 and Certify

¹⁵ Revised as of July 22, 2020.

¹⁶ Compliance Order By Consent

¹⁷ Compliance Order

Section 1. Excess Emissions

(a) **Was the exceedance** Intermittent or Continuous

(b) **Cause of Event** (Check one that applies. Complete a separate form for each event, as applicable.):

- Start Up/Shut Down Natural Cause (weather/earthquake/flood)
 Control Equipment Failure Schedule Maintenance/Equipment Adjustment
 Bad Fuel/Coal/Gas Upset Condition Other _____

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

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

EU ID	EU Name	Permit Condition Exceeded/Limit/Potential

(e) **Type of Incident** (please check only one):

- Opacity _____ % Venting _____ gas/scf Control Equipment Down
 Fugitive Emissions Emission Limit Exceeded Marine Vessel Opacity
 Flaring Other _____

(f) **Corrective Actions:**

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

(g) **Unavoidable Emissions:**

Do you intend to assert that these excess emissions were unavoidable? Yes 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 all boxes that apply per event. Complete a separate form for each event, as applicable.)

- Emissions Unit-Specific Requirements
- Stationary Source-Wide Specific Requirements
- Monitoring/Recordkeeping/Reporting Requirements
- General Source Test Requirements
- Compliance Certification Requirements
- Standard/Generally Applicable Requirements
- Insignificant Emissions Unit Requirements
- Other: _____

(b) **Emissions Units Involved:**

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

EU ID	EU Name	Permit Condition/ Potential Deviation

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

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

(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). Read and sign the certification in the bottom of the form above. (See Condition 68)*

Submit this report in accordance with the submission instructions on the Department's Standard Permit Conditions web page at <http://dec.alaska.gov/air/air-permit/standard-conditions/standard-conditions-iii-and-iv-submission-instructions/>.

If submitted online, report must be submitted by an authorized E-signer for the stationary source (according to Condition 68).

[18 AAC 50.346(b)(3)]



Hilcorp Alaska, LLC

Post Office Box 244027
Anchorage, AK 99524-4027

3800 Centerpoint Drive
Suite 1400
Anchorage, AK 99503

Phone: 907/777-8300
Fax: 907/777-8301

July 18, 2023

Alaska Department of Environmental Conservation
Air Permits Program
610 University Avenue
Fairbanks, AK 99709-3643
Attention: Compliance Technician

Subject: Hilcorp Alaska, LLC – Swanson River Field
Notification of Off-Permit Change

Dear Compliance Technician:

Hilcorp Alaska, LLC (Hilcorp) is submitting this notification to the Alaska Department of Environmental Conservation of an Off-Permit Change at the Swanson River Field Title V Operating Permit AQ0059TVP03, Revision 2. The contents of this notification are consistent with the requirements of 40 CFR 71.6(a)(12)(ii). The notification information is set forth below.

Description of Change: Hilcorp plans to install a 36 electric kilowatt (kW-e) Generac RG036 fuel gas-fired emergency generator engine at the Swanson River Field.

Date of Change: The engine is scheduled to be installed in July 2023.

Change in Emissions: Major Permitting. Swanson River Field is currently a Prevention of Significant Deterioration (PSD) major stationary source. The project is considered a physical change or change in the method of operation. An emissions analysis was performed pursuant to 40 CFR 52.21(b) to determine if the project is a “major modification” subject to PSD preconstruction permitting requirements. As shown in the attached emissions calculations, the emissions increases are below the PSD major modification thresholds and thus a PSD permit is not required.

Minor Permitting. An applicability analysis with respect to the minor permit thresholds was performed using the potential increases as set forth in 18 AAC 50.502(c)(3)(A). The attached

emissions calculations detail the permit applicability. A minor permit under 18 AAC 50.502(c)(3) is not required for this project.

Pollutants Emitted: The attached tables summarize the PSD and minor source criteria pollutants emitted as a result of this project.

Applicable Requirements: The engine will be subject to New Source Performance Standards (NSPS) Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. The engine is certified as an emergency spark ignition engine under NSPS Subpart JJJJ with a non-resettable hour meter. Because the remaining Title V permit term is less than three years, Hilcorp will incorporate the requirements of NSPS Subpart JJJJ in the next renewal.

Please contact Natalia Lau at (907) 777-8304 or Natalia.Lau@hilcorp.com with any questions or concerns.

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

Sincerely,



Chris Kanyer
Asset Team Lead
Hilcorp Alaska, LLC

cc: EPA Region 10
Alaska Air Compliance, Hilcorp

Attachment

Attachment – Emissions Calculations

PSD Applicability Analysis

Pollutant	Project Potential Emissions Increase	PSD Applicability Thresholds	Applicable?
NO _x	0.5 tpy	40 tpy	No
CO	20.4 tpy	100 tpy	No
PM	0.0 tpy	25 tpy	No
PM-10	0.0 tpy	15 tpy	No
PM-2.5	0.0 tpy	10 tpy	No
PM-2.5 indirect – NO _x	0.5 tpy	40 tpy	No
PM-2.5 indirect – SO ₂	0.0 tpy	40 tpy	No
VOC	0.5 tpy	40 tpy	No
SO ₂	0.0 tpy	40 tpy	No

Note: The projected actual emissions increase is equivalent to the potential to emit for the emergency engine at 500 hours per year consistent with the EPA Seitz memorandum dated September 6, 1995.

Minor Permit Applicability Analysis

Pollutant	Stationary Source Potential Emissions Increase	Minor Permit Applicability Thresholds	Applicable?
NO _x	0.5 tpy	10 tpy	No
CO	20.4 tpy	N/A	No
PM-10	0.0 tpy	10 tpy	No
PM-2.5	0.0 tpy	10 tpy	No
VOC	0.5 tpy	N/A	No
SO ₂	0.0 tpy	10 tpy	No

Note: The potential to emit increase is equivalent to the potential to emit for the emergency engine at 500 hours per year consistent with the EPA Seitz memorandum dated September 6, 1995.



Hilcorp Alaska, LLC

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October 18, 2023

Alaska Department of Environmental Conservation
Air Permits Program
610 University Avenue
Fairbanks, AK 99709-3643
Attention: Compliance Technician

Subject: Hilcorp Alaska, LLC – Swanson River Field
Notification of Off-Permit Change

Dear Compliance Technician:

Hilcorp Alaska, LLC (Hilcorp) is submitting this notification to the Alaska Department of Environmental Conservation of an Off-Permit Change at the Swanson River Field Title V Operating Permit AQ0059TVP03, Revision 2. The contents of this notification are consistent with the requirements of 40 Code of Federal Regulation (CFR) 71.6(a)(12)(ii). The notification information is set forth below.

Description of Change: Hilcorp plans to install a 20 electric kilowatt (kW-e) Briggs & Stratton PP20 fuel gas-fired emergency generator engine at the Swanson River Field.

Date of Change: The engine is scheduled to be installed in October 2023.

Change in Emissions: Major Permitting. Swanson River Field is currently a Prevention of Significant Deterioration (PSD) major stationary source. The project is considered a physical change or change in the method of operation. An emissions analysis was performed pursuant to 40 CFR 52.21(b) to determine if the project is a “major modification” subject to PSD preconstruction permitting requirements. As shown in the attached emissions calculations, the emissions increases are below the PSD major modification thresholds and thus a PSD permit is not required.

Minor Permitting. Swanson River Field is an existing stationary source with a potential to emit an air pollutant greater than an amount listed in 18 AAC 50.502(c)(1). An applicability analysis with respect to the minor permit thresholds was performed using

the potential increases as set forth in 18 AAC 50.502(c)(3)(A). The project will not result in an increase in potential emissions from the stationary source and thus a minor permit is not required.

Notification of an Off Permit Change was submitted on July 18, 2023 for a 36 kW-e Generac RG036 fuel gas-fired emergency generator engine. Although Hilcorp believes these two projects are independent of each other, combined emissions from both projects continue to be below the PSD major modification and minor permit thresholds.

Pollutants Emitted: The attached tables summarize the pollutants emitted as a result of this project.

Applicable Requirements: The engine will be subject to New Source Performance Standards (NSPS) Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. The engine is certified as an emergency spark ignition engine under NSPS Subpart JJJJ with a non-resettable hour meter. Because the remaining Title V permit term is less than three years, Hilcorp will incorporate the requirements of NSPS Subpart JJJJ for this engine in the next renewal.

Please contact Natalia Lau at (907) 777-8304 or Natalia.Lau@hilcorp.com with any questions or concerns.

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

Sincerely,



Chris Kanyer
Asset Team Lead
Hilcorp Alaska, LLC

cc: EPA Region 10
Alaska Air Compliance, Hilcorp

Attachment

Attachment – Emissions Calculations

PSD Applicability Analysis

Pollutant	Project Potential Emissions Increase	PSD Applicability Thresholds	Applicable?
NO _x	0.2 tpy	40 tpy	No
CO	7.3 tpy	100 tpy	No
PM	0.0 tpy	25 tpy	No
PM-10	0.0 tpy	15 tpy	No
PM-2.5	0.0 tpy	10 tpy	No
PM-2.5 indirect – NO _x	0.2 tpy	40 tpy	No
PM-2.5 indirect – SO ₂	0.0 tpy	40 tpy	No
VOC	0.2 tpy	40 tpy	No
SO ₂	0.0 tpy	40 tpy	No

Note: The projected actual emissions increase is equivalent to the potential to emit for the emergency engine at 500 hours per year consistent with the EPA Seitz memorandum dated September 6, 1995.

Minor Permit Applicability Analysis

Pollutant	Stationary Source Potential Emissions Increase	Minor Permit Applicability Thresholds	Applicable?
NO _x	0.2 tpy	10 tpy	No
CO	7.3 tpy	N/A	No
PM-10	0.0 tpy	10 tpy	No
PM-2.5	0.0 tpy	10 tpy	No
VOC	0.2 tpy	N/A	No
SO ₂	0.0 tpy	10 tpy	No

Note: The potential to emit increase is equivalent to the potential to emit for the emergency engine at 500 hours per year consistent with the EPA Seitz memorandum dated September 6, 1995.