



**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

October 18, 2024

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

**Subject:** Hilcorp Alaska, LLC – Dolly Varden Platform  
Air Quality Operating Permit No. AQ0060TVP04 Application for Renewal

Dear Application Intake:

Please find attached the Hilcorp Alaska, LLC (Hilcorp) application for renewal of Air Quality Operating Permit No. AQ0060TVP04 for Dolly Varden Platform. Under Condition 82 of the permit, an application must be submitted no sooner than October 29, 2023 and no later than October 29, 2024. Hilcorp understands that submittal by the October 29, 2024 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 Dolly Varden Platform 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 Drew Anderson at (907) 777-8488 or [ananderson@hilcorp.com](mailto:ananderson@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 "Trudi Hallett".

Trudi Hallett  
Asset Team Lead  
Hilcorp Alaska, LLC

Alaska Department of Environmental Conservation  
Air Permit Program – Attn: Application Intake  
October 18, 2024  
Page 2 of 2

Enclosure: Dolly Varden Platform Air Quality Operating Permit Renewal Application

cc: Electronic Copy  
US EPA Region 10  
M/S OAW 150  
1200 Sixth Avenue, Suite 900  
Seattle, WA, 98101

Drew Anderson, Hilcorp  
Jeanette Brena, Boreal



**Hilcorp Alaska, LLC**

**Dolly Varden**

**Application for Renewal of an Air Quality  
Operating Permit**

Prepared for:

Hilcorp Alaska, LLC

**October 2024**



**B O R E A L**

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**Dolly Varden**  
**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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- Minor Permit No. AQ0060MSS03

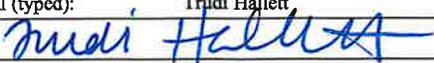


# Section A

## Stationary Source

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

**FORM A1**  
**Stationary Source (General Information)**

GENERAL INFORMATION		
<b>1. Permittee:</b>		
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
<b>2. Stationary Source Name:</b> Dolly Varden Platform		
<b>3. Stationary Source Physical Address:</b>		
Physical Address Line 1: Upper Cook Inlet		
Physical Address Line 2		
City:	State: AK	Zip Code:
<b>4. Location:</b>	Latitude: 60°48'23.3" North	Longitude: 151°37'57.7" West
<b>5. Primary SIC Code:</b> 1311	SIC Code Description: Oil and Gas Extraction	<b>Primary NAICS Code:</b> 211111 – Crude Petroleum and Natural Gas Extraction
<b>6. Current/Previous Title V Air Permit No.:</b> AQ0060TVP04		Expiration Date: April 29, 2025
<b>7. Does this application contain confidential data?</b> <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)		
<b>Owner:</b>		<b>Operator:</b>
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
<b>Permittee's Responsible Official:</b>		<b>Designated Agent:</b>
Name/Title: Please see attached sheet.		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:	State:      Zip Code:	City: Juneau      State: AK      Zip Code: 99801
<b>Stationary Source and Building Contact:</b>		<b>Fee Contact:</b>
Name/Title: Drew Anderson, P.E./Environmental Engineer		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) 777-8488	Email: ananderson@hilcorp.com	Phone:      Email:
<b>Permit Contact:</b>		<b>Person or Firm that Prepared Application:</b>
Name/Title: Drew Anderson, P.E./Environmental Engineer		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) 777-8488	Email: ananderson@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): Trudi Hallett		Title: Asset Team Lead
X Signature (blue ink): 		Date: 10/18/2024

**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**

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Permit Number:     AQ0060TVP04    

1.	Permit Contact: Name	Drew Anderson, P.E.
	Title	Environmental Engineer
	Mailing Address Line 1	3800 Centerpoint Drive, Suite 1400
	Mailing Address Line 2	Anchorage, AK 99503
	Phone Number	(907) 777-8488
	Email	<a href="mailto:ananderson@hilcorp.com">ananderson@hilcorp.com</a>
2.	Were there any changes to stationary source General Information (Form A1)? If yes, complete and submit a Form A1.	Yes, please 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.	No.
	If yes, integrate changes into renewal permit? [if no, explain]	N/A
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]	No.
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 the attached B Forms and Form E3.
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.]	No.
11.	Are there any other new applicable requirements? [if yes, list the new applicable requirements, emissions units, and attach the appropriate Series E Form]	No.

**FORM A4**

**Title V Air Operating Permit Renewal Application Information**

	<p>Are there any requested changes in the assessable potential to emit other than those identified in item 9 above? [if yes, answer the following]</p>	<p>Yes, please see attached D Forms.</p>
12.	<p>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.]</p>	<p>Yes.</p>
	<p>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.]</p>	<p>No.</p>
13.	<p>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.</p>	<p>Yes, please see attached compliance certification.</p>
14.	<p>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.]</p>	<p>Yes, please see attached Form E3.</p>
15.	<p>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.]</p>	<p>No.</p>
16.	<p>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.]</p>	<p>Yes, please see attached Form E3.</p>
17.	<p>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.]</p>	<p>Yes, please see attached Form E3.</p>
18.	<p>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.]</p>	<p>Yes, please see attached Forms B1, B2, B5, and E4.</p>

**FORM A4**  
**Title V Air Operating Permit Renewal Application Information**

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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, please 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.*

Trudi Hallett  
\_\_\_\_\_  
**Name of Responsible Official**

Asset Team Lead  
\_\_\_\_\_  
**Title**

  
\_\_\_\_\_  
**Signature (blue ink)**

10/18/2024  
\_\_\_\_\_  
**Date**

**Attachment A-1: Compliance Certification**  
Dolly Varden Platform Operating Permit No. AQ0060TVP04  
Title V Renewal Application

Permit Condition		Compliance Status	Method Used to Determine Status
No.	Summary/Description		[40 CFR 71.5(c)(9)]
<b>Section 3. State Requirements</b>			
<b>Visible Emissions Standards</b>			
1	<b>Industrial Process and Fuel-Burning Equipment Visible Emissions.</b> The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from EU IDs 1, 2, 5 through 10, 12, 13, 16, 17, and 20 through 26 listed in Table A and EU IDs K6 and K7 listed in Table B to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	In Compliance	Records Review and Field Verification/Interview
	1.1. For EU IDs 1, 2, 5 through 9, 12, 13, 16, 17, and 26, burn only gas as fuel. Monitoring for these emissions units shall consist of a statement in each operating report under Condition 74 indicating whether each of these emissions units burned only gas during the period covered by the report. Report under Condition 73 if any fuel other than gas is burned.	In Compliance	Records Review and Field Verification/Interview
	1.2. For EU ID 10, burn only gas as the primary fuel. Monitoring for this emissions unit shall consist of a statement in each operating report required under Condition 74 indicating whether this emissions unit burned gas as the primary fuel during the period covered by the report. If EU ID 10 operated on a back-up liquid fuel during the period covered by the report, the Permittee shall monitor, record, and report in accordance with Condition 13.	In Compliance	Records Review
	1.3. For each of EU IDs 20, 21, and 24, as long as the emissions unit does not exceed the significant emissions thresholds listed in 18 AAC 50.326(e), monitoring shall consist of an annual compliance certification under Condition 75 for the visible emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 74 if any of EU IDs 20, 21, and 24 exceeds the significant emissions thresholds listed in 18 AAC 50.326(e) and monitor, record, and report in accordance with Conditions 2 through 4 for the remainder of the permit term for that emissions unit.	In Compliance	Records Review
	1.4. For each of EU IDs 22 and 23, as long as the emissions unit does not exceed the hour limits in Condition 19.2, monitoring shall consist of an annual compliance certification under Condition 75 for the visible emissions standard based on reasonable inquiry. Otherwise, monitor, record, and report in accordance with Conditions 2 through 4 for the remainder of the permit term for that emissions unit.	In Compliance	Records Review
	1.5. For the flare, EU ID 25, monitor, record and report in accordance with Condition 5.	In Compliance	Records Review
1.6. For each of EU IDs K6 and K7, the Permittee shall monitor, record, and report as follows: a. Within two days of initial startup after each relocation to the Dolly Varden Platform, the Permittee shall observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations. b. Record and report in accordance with Conditions 3 and 4.	In Compliance	Field Verification/Interview	
<b>Visible Emissions Monitoring, Recordkeeping and Reporting</b>			
2	<b>Visible Emissions Monitoring.</b> When required by Condition 1.3 or 1.4, the Permittee shall observe the exhaust of each of EU IDs 20 through 24 for visible emissions using the Method 9 Plan under Condition 2.2.	In Compliance	Records Review
	2.1. The Permittee may for each unit elect to continue the visible emissions monitoring schedule in effect from the previous permit at the time a renewed permit is issued, if applicable.	In Compliance	Records Review
	2.2. <b>Method 9 Plan.</b> For all observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations. a. <b>First Method 9 Observation.</b> Except as provided in Condition 2.1, observe exhausts of EU IDs 20 through 24 according to the following criteria: (i) Except as provided in Conditions 2.2.a(ii) through 2.2.a(iv), for any of EU IDs 20 through 24, observe exhaust within six months after the issue date of this permit. (ii) In the event of replacement of any of EU IDs 20 through 24 during the term of this permit, observe exhaust within 30 days of startup of the newly installed emissions units. (iii) For EU IDs 20 through 24, observe the exhaust of the emissions unit within 30 days after the end of the calendar month during which any of the significant emissions thresholds in 18 AAC 50.326(e) was exceeded. (iv) For any of EU IDs 20 through 24 with intermittent operations, within 30 days of the unit's next scheduled operation. b. <b>Monthly Method 9 Observations.</b> After the first Method 9 observation conducted under Condition 2.2.a, perform 18-minute observations at least once in each calendar month that an emissions unit operates; or for an emissions unit with intermittent operations, at least once in each calendar month that the emissions unit is scheduled to operate. c. <b>Semiannual Method 9 Observations.</b> After observing emissions for three consecutive operating months under Condition 2.2.b, unless a six-consecutive minute average opacity is greater than 15 percent and one or more observations are greater than 20 percent, perform observations (i) within six months after the preceding observation, or (ii) for an emissions unit with intermittent operations, during the next scheduled operation immediately following six months after the preceding observation.	In Compliance	Records Review

**Attachment A-1: Compliance Certification**  
Dolly Varden Platform Operating Permit No. AQ0060TVP04  
Title V Renewal Application

Permit Condition		Compliance Status	Method Used to Determine Status
No.	Summary/Description		[40 CFR 71.5(c)(9)]
2	<p><b>d. Annual Method 9 Observations.</b> After at least two semiannual observations under Condition 2.2.c, unless a six-consecutive-minute average opacity is greater than 15 percent and one or more individual observations are greater than 20 percent, perform observations</p> <p>(i) within twelve months after the preceding observation; or</p> <p>(ii) for an emissions unit with intermittent operations, during the next scheduled operation immediately following twelve months after the preceding observation.</p> <p><b>e. Increased Method 9 Frequency.</b> 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 observations are greater than 20 percent, then increase or maintain the observation frequency for that emissions unit to at least monthly intervals as described in Condition 2.2.b, and continue monitoring in accordance with the Method 9 Plan.</p>	In Compliance	Records Review
3	<p><b>Visible Emissions Recordkeeping.</b> The Permittee shall keep records as follows:</p> <p>3.1. For all Method 9 observations under Conditions 1.6 and 2.2,</p> <p>a. the observer shall record the following:</p> <p>(i) the name of the stationary source, emission unit, and location; stationary source type, observer's name, and affiliation; and the date on the Visible Emissions Field Data Sheet in Section 11;</p> <p>(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 mode (<i>load or fuel consumption rate or best estimate if unknown</i>) on the sheet at the time opacity observations are initiated and completed;</p> <p>(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;</p> <p>(iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation Form in Section 11;</p> <p>(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; and</p> <p>(vi) the date and time of initial startup of EU IDs K6 and K7 after each relocation to the Dolly Varden Platform.</p>	In Compliance	Records Review
	<p>3.1.b. To determine the six-consecutive-minute average opacity,</p> <p>(i) divide the observations recorded on the record sheet into sets of 24 consecutive observations;</p> <p>(ii) sets need not be consecutive in time and in no case shall two sets overlap;</p> <p>(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</p> <p>(iv) record the average opacity on the sheet.</p> <p>c. Calculate and record the highest six-consecutive- and 18-consecutive-minute average opacities observed.</p> <p>3.2. The records may be kept in electronic format.</p>	In Compliance	Records Review
4	<p><b>Visible Emissions Reporting.</b> The Permittee shall report visible emissions as follows:</p> <p>4.1. Include in each operating report under Condition 74 for the period covered by the report:</p> <p>a. for all Method 9 observations under Conditions 1.6 and 2.2:</p> <p>(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</p> <p>(ii) a summary to include:</p> <p>(A) number of days observations were made;</p> <p>(B) highest six-consecutive- and 18-consecutive-minute average opacities;</p> <p>(C) dates when one or more observed six-consecutive-minute averages were greater than 20 percent;</p> <p>(iii) for EU IDs K6 and K7, the dates and times recorded under Condition 3.1.a(vi); and</p> <p>b. a summary of any monitoring or recordkeeping required under Conditions 1.6, 2 and 3 that was not done;</p> <p>4.2. Report under Condition 73:</p> <p>a. the results of Method 9 observations that exceed an average of 20 percent opacity for any six-consecutive-minute period; and</p> <p>b. if any monitoring under Conditions 1.6 and 2 was not performed when required, report within three days of the date the monitoring was required.</p>	In Compliance	Records Review
5	<p><b>Visible Emissions Monitoring, Recordkeeping, and Reporting.</b> For EU ID 25, the Permittee shall observe one daylight flare event within 12 months of the preceding flare event observation. If no event exceeds 1 hour within that 12-month period, then the Permittee shall observe the next daylight flare event.</p> <p>5.1. Monitor flare events using Method 9.</p> <p>5.2. Record the following information for observed events:</p> <p>a. the flare(s) EU ID number;</p> <p>b. results of the Method-9 observations;</p> <p>c. reason(s) for flaring;</p> <p>d. date, beginning and ending time of event; and</p> <p>e. volume of gas flared.</p> <p>5.3. The records required by Condition 5.2 may be kept in electronic format</p>	In Compliance	Records Review
	<p>5.4. Monitoring of a flare event may be postponed for safety or weather reasons, or because a qualified observer is not available. If monitoring of a flare event is postponed for any of the reasons described in this condition, the Permittee shall include in the next operating report required by Condition 74 an explanation of the reason the event was not monitored.</p>	In Compliance	Records Review

**Attachment A-1: Compliance Certification**  
Dolly Varden Platform Operating Permit No. AQ0060TVP04  
Title V Renewal Application

Permit Condition		Compliance Status	Method Used to Determine Status
No.	Summary/Description		[40 CFR 71.5(c)(9)]
5	5.5. Attach copies of the records required by Condition 5.2 with the operating report required by Condition 74 for the period covered by the report. 5.6. Report under Condition 73 whenever the opacity standard in Condition 1 is exceeded.	In Compliance	Records Review
<b>Particulate Matter (PM) Emissions Standards</b>			
6	<b>Industrial Process and Fuel-Burning Equipment PM Emissions.</b> The Permittee shall not cause or allow particulate matter emitted from EU IDs 1, 2, 5 through 10, 12, 13, 16, 17, and 20 through 26 listed in Table A and EU IDs K6 and K7 listed in Table B to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.	In Compliance	Records Review and Field Verification/Interview
	6.1. For EU IDs 1, 2, 5 through 9, 12, 13, 16, 17, and 26, comply with Condition 1.1.	In Compliance	Records Review and Field Verification/Interview
	6.2. For EU ID 10, the Permittee shall monitor, record and report according to Condition 1.2.	In Compliance	Records Review
	6.3. For each of EU IDs 20, 21, and 24, as long as the emissions unit does not exceed the significant emissions thresholds listed in 18 AAC 50.326(e), monitoring shall consist of an annual compliance certification under Condition 75 for the PM emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 74 if any of EU IDs 20, 21, and 24 exceeds the significant emissions thresholds listed in 18 AAC 50.326(e) and monitor, record, and report in accordance with Conditions 7 through 9 for the remainder of the permit term for that emissions unit.	In Compliance	Records Review
	6.4. For each of EU IDs 22 and 23, as long as the emissions unit does not exceed the hour limits in Condition 19.2, monitoring shall consist of an annual compliance certification under Condition 75 for the PM emissions standard based on reasonable inquiry. Otherwise, monitor, record, and report in accordance with Conditions 7 through 9 for the remainder of the permit term for that emissions unit.	In Compliance	Records Review
	6.5. For the flare, EU ID 25, monitor, record and report in accordance with Condition 5.	In Compliance	Records Review
	6.6. For each of EU IDs K6 and K7, the Permittee shall monitor, record, and report in accordance with Conditions 10 through 12.	In Compliance	Records Review
<b>PM Monitoring, Recordkeeping and Reporting (MR&amp;R)</b>			
7	<b>Particulate Matter Monitoring.</b> The Permittee shall conduct source tests on the diesel engines, EU IDs 20 through 24 (when required by Condition 6.3 or 6.4), and on the diesel fired turbine EU ID 10 (when required by Condition 13.3.a), to determine the concentration of PM in the exhaust of each of the emissions units as follows: 7.1. If the result of any Method 9 observation conducted under Condition 2.2 for any of EU IDs 20 through 24 is greater than the criteria of Conditions 7.2.a or 7.2.b, or if the Method 9 observation conducted under Condition 13.3 for EU ID 10 exceeds the standard in Condition 1, the Permittee shall, within six months of that Method 9 observation, either: a. make repairs and observe the emissions unit exhaust under load conditions comparable to those when the criteria were exceeded, following 40 C.F.R. 60, Appendix A-4 Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations, to show that emissions are no longer greater than the criteria of Condition 7.2; or b. except as exempted under Condition 7.4, conduct a PM source test according to requirements set out in Section 6.	In Compliance	Records Review
	7.2. Conduct the PM source test or make repairs according to Condition 7.1, if any Method 9 observation under Condition 2.2 results in an 18-minute average opacity greater than a. 20 percent for an emissions unit with an exhaust stack diameter that is equal to or greater than 18 inches; or b. 15 percent for an emissions unit with an exhaust stack diameter that is less than 18 inches, unless the Department has waived this requirement in writing. 7.3. During each one-hour PM source test run under Condition 7.1.b, observe the emissions unit exhaust for 60 minutes in accordance with Method 9 and calculate the highest 18-consecutive-minute average opacity measured during each one hour test run. Submit a copy of these observations with the source test report. 7.4. The PM source test requirements in Condition 7.1.b are waived for an emissions unit if a source test on that unit has shown compliance with the PM standard during this permit term.	In Compliance	Records Review
8	<b>Particulate Matter Recordkeeping.</b> The Permittee shall keep records of the results of any PM source test and visible emissions observations conducted under Condition 7.	In Compliance	Records Review
9	<b>Particulate Matter Reporting.</b> The Permittee shall report as follows: 9.1. Report under Condition 73 a. the results of any PM source test that exceed the PM emissions limit; or b. if the requirements under Condition 7.1 were triggered and the Permittee did not comply on time with either Condition 7.1.a or 7.1.b. Report the deviation within 24 hours of the date compliance with Condition 7.1 was required. 9.2. Notify the Department of any Method 9 observation results that are greater than the threshold of either Condition 7.2.a or 7.2.b within 30 days of the end of the month in which the observations occurred. Include the dates, EU ID(s), and results when an observed 18-minute average opacity was greater than an applicable threshold in Condition 7.2. 9.3. In each operating report under Condition 74, include for the period covered by the report: a. a summary of the results of any PM testing and visible emissions observations under Condition 7; and b. copies of any visible emissions observation results (opacity observations) greater than the thresholds of Condition 7.2, if they were not already submitted.	In Compliance	Records Review

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No.	Summary/Description		[40 CFR 71.5(c)(9)]
<b>Liquid Fired-Burning Boilers and Heaters, EU IDs K6 and K7</b>			
10	<p><b>PM Monitoring.</b> The Permittee shall demonstrate compliance with Condition 6 by conducting PM source tests on any of EU IDs K6 and K7, as follows:</p> <p>10.1. Except as exempted under Condition 10.3, conduct a PM source test according to the requirements in Section 6 no later than 90 calendar days after the Method 9 visible emissions observations conducted under Condition 1.6 showed an exceedance of the limit in Condition 1.</p> <p>10.2. During each one-hour PM source test run under Condition 10.1, observe the emissions unit exhaust for 60 minutes in accordance with Method 9 and calculate the average opacity measured during each one-hour test run. Submit a copy of these observations with the source test report.</p> <p>10.3. The PM source test requirement in Condition 10.1 is waived for an emissions 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 an 18-minute visible emissions observation is conducted within 30 days to show that the excess visible emissions described in Condition 10.1 no longer occur.</p>	In Compliance	Field Verification/Interview
11	<p><b>PM Recordkeeping.</b> The Permittee shall keep records of the results of any PM source test and visible emissions observations conducted under Condition 10.</p>	In Compliance	Field Verification/Interview
12	<p><b>PM Reporting.</b> The Permittee shall report as follows:</p> <p>12.1. In each operating report required by Condition 74, include for the period covered by the report a summary of the results of any source test and visible emissions observations conducted under Condition 10.</p> <p>12.2. Report in accordance with Condition 73 any time the results of a source test exceed the PM emission standard in Condition 6.</p>	In Compliance	Field Verification/Interview
<b>VE &amp; PM MR&amp;R for Dual Fuel-Fired Units (EU ID 10)</b>			
13	<p>The Permittee shall monitor, record and report the monthly hours of operation of EU ID 10 when operating on a back-up liquid fuel.</p> <p>13.1. If EU ID 10 does not exceed 400 hours of operations per calendar year on a back-up liquid fuel, monitoring of compliance for visible emissions and PM shall consist of an annual compliance certification under Condition 75.</p> <p>13.2. For EU ID 10, notify the Department and begin monitoring the affected emissions unit in accordance with Condition 13.3 no later than 15 days after the end of a calendar month in which the cumulative hours of operation for the calendar year exceed any multiple of 400 hours on a back-up liquid fuel, or during the next scheduled operation on back-up liquid fuel.</p> <p>13.3. When required to do so by Condition 13.2, observe the emissions unit exhaust, following 40 C.F.R. 60, Appendix A-4 Method 9 for 18-minutes to obtain 72 consecutive 15-second opacity observations.</p> <p>a. If the observation exceeds the standard in Condition 1, monitor as described in Condition 7.</p> <p>b. If the observation does not exceed the standard in Condition 1, no additional monitoring is required until the cumulative hours of operation exceed each subsequent multiple of 400 hours on back-up liquid fuel during a calendar year.</p> <p>13.4. Keep records and report in accordance with Conditions 3, 4, 8, and 9, as applicable.</p> <p>13.5. Report under Condition 73 if the Permittee fails to comply with any of Conditions 13.2, 13.3 or 13.4.</p>	In Compliance	Records Review and Field Verification/Interview
		In Compliance	Records Review
		In Compliance	Records Review
<b>Sulfur Compound Emission Standards Requirements</b>			
14	<p><b>Sulfur Compound Emissions.</b> The Permittee shall not cause or allow sulfur compound emissions, expressed as SO<sub>2</sub>, from EU IDs 1, 2, 5 through 10, 12, 13, 16, 17, and 20 through 26 listed in Table A and EU IDs K6 and K7 listed in Table B to exceed 500 ppm averaged over three hours.</p>	In Compliance	Records Review

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<b>Sulfur Compound MR&amp;R</b>			
14	<p>14.1. For EU ID 10 (when burning diesel) and EU IDs 20 through 24:  a. the Permittee shall do one of the following for each shipment of fuel:  (i) If the fuel grade requires a sulfur content less than 0.5 wt%<i>S</i><sub>fuel</sub>, keep receipts that specify fuel grade and amount; or  (ii) If the fuel grade does not require a sulfur content less than 0.5 wt%<i>S</i><sub>fuel</sub>, 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.  b. Fuel testing under Condition 14.1 must follow an appropriate method listed in 18 AAC 50.035(b)-(c) or 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1).  c. If a load of fuel contains greater than 0.75 percent sulfur by weight, the Permittee shall calculate SO<sub>2</sub> emissions in ppm using either the material balance calculation in Section 12 or Method 19 of 40 C.F.R. 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a).  d. The Permittee shall report as follows:  (i) If SO<sub>2</sub> emissions calculated under Condition 14.1.c exceed 500 ppm, the Permittee shall report under Condition 73. When reporting under this condition, include the calculation under Condition c.  (ii) The Permittee shall include in the operating report required by Condition 74  (A) a list of the fuel grades received at the stationary source during the reporting period;  (B) for any grade with a maximum fuel sulfur greater than 0.5 percent sulfur, the fuel sulfur of each shipment; and  (C) for fuel with a sulfur content greater than 0.75 percent, the calculated SO<sub>2</sub> emissions in ppm.</p> <p>14.2. For the drill rig boilers, EU IDs K6 and K7:  a. The Permittee shall demonstrate compliance with the SO<sub>2</sub> standard in Condition 14 by complying with the fuel sulfur limit in Condition 17 and the associated monitoring, recordkeeping, and reporting requirements under Condition 17.1.</p> <p>14.3. The Permittee shall analyze a representative sample of the fuel annually to determine the sulfur content using either ASTM D4084, D5504, D4810, D4913, D6228 or GPA Standard 2377, or a listed method approved in 18 AAC 50.035(b)-(c) or 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1).  14.4. The Permittee shall keep records of the sulfur content analysis required under Condition 14.3.</p> <p>14.5. The Permittee shall include copies of the records required by Condition 14.4 with the operating report required by Condition 74 for the period covered by the report.  14.6. The Permittee shall report as excess emissions, in accordance with Condition 73, whenever the fuel combusted causes sulfur compound emissions to exceed the standard of Condition 14.</p>	In Compliance	Records Review
		In Compliance	Records Review and Field Verification/Interview
		In Compliance	Records Review
		In Compliance	Records Review
<b>Pre-construction Permit Requirements</b>			
15	<p><b>Fuel Gas H<sub>2</sub>S Limits.</b> To protect the AAQs for SO<sub>2</sub>, the Permittee shall comply with the following fuel gas hydrogen sulfide (H<sub>2</sub>S) content limits:  15.1. The maximum H<sub>2</sub>S concentration of the fuel gas for EU IDs 13 and 26 shall not exceed 1,000 ppmv.  15.2. The maximum H<sub>2</sub>S concentration of the fuel gas for all other gas-fired emissions units, other than EU IDs 13 and 26, at the stationary source shall not exceed 2,000 ppmv.  15.3. Monitor, record, and report fuel gas H<sub>2</sub>S content as described in Condition 14.3 through 14.5.  15.4. Report under Condition 73 any time the fuel gas H<sub>2</sub>S concentration exceeds the limit in Conditions 15.1 and 15.2.</p>	In Compliance	Records Review
16	<p><b>Liquid Fuel Sulfur Content Limit.</b> To protect AAQs for SO<sub>2</sub>, the Permittee shall comply with following fuel sulfur content limit:  16.1. The maximum sulfur content of diesel or distillate fuel burned shall not exceed 0.5 wt%<i>S</i><sub>fuel</sub>.  16.2. Monitor, record, and report as described in Conditions 14.1, 14.1.b, and 14.1.d(ii) through 14.1.d(ii)(B).  16.3. Report in accordance with Condition 73 any time the fuel sulfur content of the liquid fuel burned at the stationary source exceeds the limit in Condition 16.1.</p>	In Compliance	Records Review
17	<p><b>Liquid Fuel Sulfur Content Limit, Drill Rig EUs.</b> To protect the 1-hour, 3-hour, 24-hour and annual SO<sub>2</sub> Alaska AAQs, the Permittee shall limit the liquid fuel sulfur content to no more than 15 ppmw for all Kuukpik V Drill Rig emissions units listed in Table B.</p> <p>17.1. The Permittee shall do one of the following for each shipment of fuel for the Kuukpik V Drill Rig:  a. If the fuel grade requires a sulfur content of 15 ppmw or less, keep receipts that specify the fuel grade and amount of fuel; or  17.1.b. If the fuel grade does not require a sulfur content of 15 ppmw or less, keep receipts that specify the fuel grade and amount of fuel and:  (i) test the fuel for sulfur content; or  (ii) 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.  c. Fuel testing under Condition 17 must follow an appropriate method listed in 18 AAC 50.035(b)-(c) or 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1).</p>	In Compliance	Records Review and Field Verification/Interview
		In Compliance	Records Review and Field Verification/Interview

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17	d. The Permittee shall include in the operating report required by Condition 74: (i) a list of the fuel grades received at the Kuukpik V Drill Rig during the reporting period; and (ii) copies of any test results obtained in accordance with Condition 17.1.b. e. If the sulfur content of any liquid fuel exceeds the limit in Condition 17, the Permittee shall report in accordance with Condition 73.	In Compliance	Records Review and Field Verification/Interview
18	<b>Drill Rig Configuration Limits.</b> To protect the annual NO <sub>2</sub> , 24-hour PM-10, annual PM-2.5, and 1-hour, 3-hour, 24-hour, and annual SO <sub>2</sub> AAAQS, the Permittee shall comply with the following: 18.1. Limit the total rated capacity of the Kuukpik V Drill Rig nonroad engines (NREs) to no more than 3,071 Hp. a. Any time a change is made to the Kuukpik V nonroad engine emissions unit inventory, calculate and record the total nonroad engine rated capacity (Hp). b. Include the total nonroad engine rated capacity (Hp) in each operating report required under Condition 74. c. Report in accordance with Condition 73 any time the total nonroad engine rated capacity (Hp) exceeds the limit in Condition 18.1.	In Compliance	Field Verification/Interview
	18.2. Construct and maintain vertical, uncapped exhaust stacks for all Kuukpik V Drill Rig EUs, except as noted below: a. the exhaust stacks for EU IDs K3 and K4 (light plant generators) may be tilted to no more than 45-degrees from vertical; b. the exhaust stacks for EU IDs K6 and K7 (boilers) may be capped; and c. the exhaust stacks for EU IDs K1, K2, K3, K4 and K5 may have flapper valve rain covers, or other similar design, that does not hinder the exhaust plume momentum.	In Compliance	Field Verification/Interview
	18.3. Report in accordance with Condition 73 for any stack configuration not allowed by Condition 18.2.	In Compliance	Field Verification/Interview
19	<b>Operating Hour Limits.</b> The Permittee shall not exceed the following operating hour limits during any consecutive 12-month period:		
	19.1. For each of EU IDs 20 and 21, 3,000 hours;	In Compliance	Records Review
	19.2. For each of EU IDs 22 and 23, 120 hours for the purpose of performing routine maintenance and verifying operational capability; and	In Compliance	Records Review
	19.3. For EU ID 24, 1,000 hours 19.4. The Permittee shall monitor, record, and report compliance with the corresponding operating hour limits in Conditions 19.1 through 19.3, as follows: a. At the end of each calendar month, for each of EU IDs 20 through 24, calculate and record the monthly and consecutive 12-month total operating hours for the previous month; and for each of EU IDs 22 and 23, indicate the purpose of operation; b. Report under the operating report in Condition 74 the monthly and the rolling 12-month total operating hours, as calculated and recorded in Condition 19.4.a, during that reporting period. c. Report in accordance with Condition 73 any time the rolling 12-month total operating hours exceed any of the limits in Conditions 19.1 through 19.3	In Compliance	Records Review
20	The Permittee shall limit NO <sub>x</sub> emissions from EU ID 26 to no more than 27.6 tpy. 20.1. Limit the operation of EU ID 26 out of SoLoNO <sub>x</sub> mode to no more than 815 hours per rolling 12-month period. a. Monitor and record the date, time, duration, and reason for each time EU ID 26 operates out of SoLoNO <sub>x</sub> mode. b. By the end of each calendar month, add the total hours of operation for the previous month out of SoLoNO <sub>x</sub> mode for EU ID 26. c. Calculate and record the rolling 12-month period hours of operation out of SoLoNO <sub>x</sub> for EU ID 26. d. Include in the operating report required under Condition 74 the monthly and rolling 12-month period hours of operation out of SoLoNO <sub>x</sub> mode for EU ID 26. e. Report in accordance with Condition 73 if the hours of operation out of SoLoNO <sub>x</sub> mode for EU ID 26 exceeds the limit in Condition 20.1.	In Compliance	Records Review

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No.	Summary/Description		[40 CFR 71.5(c)(9)]
<b>Insignificant Emission Units</b>			
21	For emissions units at the stationary source that are insignificant as defined in 18 AAC 50.326(d)-(i) that are not listed in this permit, the following apply: 21.1. <b>VE Standard:</b> 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. 21.2. <b>PM Standard:</b> 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. 21.3. <b>Sulfur Standard:</b> The Permittee shall not cause or allow sulfur compound emissions, expressed as SO <sub>2</sub> , from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.	In Compliance	Records Review and Field Verification/Interview
	21.4. <b>General MR&amp;R for Insignificant Emission Units.</b> The Permittee shall comply with the following: a. Submit the certification of compliance of Condition 75 based on reasonable inquiry; b. Comply with the requirements of Condition 56; c. Report in the operating report required by Condition 74 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; and d. No other monitoring, recordkeeping or reporting is required for insignificant emissions units to demonstrate compliance with the emissions standards under Conditions 21.1, 21.2, and 21.3.	In Compliance	Records Review
<b>Section 4. Federal Requirements</b>			
<b>40 C.F.R. Part 60 New Source Performance Standards (NSPS)</b>			
<b>NSPS Subpart A - General Provisions</b>			
22	<b>NSPS Subpart A Notification.</b> Unless exempted by a specific subpart, for any affected facility or existing facility regulated under NSPS requirements in 40 C.F.R. 60, the Permittee shall furnish the Administrator written notification or, if acceptable to both the EPA and the Permittee, electronic notification, as follows: 22.1. a notification of the date construction (or reconstruction as defined under 40 C.F.R. 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form; 22.2. a notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date; 22.3. a notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 C.F.R. 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include: a. information describing the precise nature of the change, b. present and proposed emission control systems, c. productive capacity of the facility before and after the change, and d. the expected completion date of the change; and	In Compliance	Records Review
	22.4. a notification of any proposed replacement of components of an existing facility, for which the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, postmarked as soon as practicable, but no less than 60 days before commencement of replacement, and including the following information: a. the name and address of owner or operator, b. the location of the existing facility, c. a brief description of the existing facility and the components that are to be replaced, d. a description of the existing and proposed air pollution control equipment, e. an estimate of the fixed capital cost of the replacements, and of constructing a comparable entirely new facility, f. the estimated life of the existing facility after the replacements, and g. a discussion of any economic or technical limitations the facility may have in complying with the applicable performance standards after the proposed replacements.	In Compliance	Records Review
23	<b>NSPS Subpart A Startup, Shutdown, &amp; Malfunction Requirements.</b> The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EU IDs 12, 13, and 26, any malfunctions of the associated air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EU IDs 12, 13, and 26 is inoperative.	In Compliance	Records Review and Field Verification/Interview

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No.	Summary/Description		[40 CFR 71.5(c)(9)]
24	<p><b>NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report.</b> The Permittee shall submit an excess emissions and monitoring systems performance (EEMSP) report and/or report form (see Condition 25) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:</p> <p>24.1. The date and time of commencement and completion of each time period of excess emissions, and the process operating time during the reporting period.</p> <p>24.2. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of EU IDs 1 through 5 and 15; the nature and cause of any malfunction (if known), and the corrective action taken or preventative measures adopted.</p> <p>24.3. The date and time identifying each period during which a Continuous Monitoring System (CMS) was inoperative except for zero and span checks and the nature of any repairs or adjustments.</p> <p>24.4. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.</p>	In Compliance	Records Review
25	<p><b>NSPS Subpart A Summary Report Form.</b> The Permittee shall submit to the Department and to EPA one "summary report form" in the format shown in Figure 1 of 40 C.F.R. 60.7 (see Attachment A to the Statement of Basis) for each pollutant monitored for EU IDs 12, 13, and 26. The report shall be submitted semiannually, postmarked by the 30th day following the end of each 6-month period, except when more frequent reporting is specifically required by an applicable subpart or the EPA, as follows:</p> <p>25.1. If the total duration of excess emissions for the reporting period is less than one percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than five percent of the total operating time for the reporting period, submit a summary report form unless the EEMSP report described in Condition 24 is requested, or</p> <p>25.2. If the total duration of excess emissions for the reporting period is one percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is five percent or greater of the total operating time for the reporting period, then submit a summary report form and the EEMSP report described in Condition 24.</p>	In Compliance	Records Review
26	<p><b>NSPS Subpart A Performance (Source) Tests.</b> The Permittee shall conduct source tests according to 40 C.F.R. 60.8 and Section 6 on any affected facility at such times as may be required by the Administrator, and shall provide the Department and EPA with a written report of the results of the source test.</p>	In Compliance	Records Review
27	<p><b>NSPS Subpart A Good Air Pollution Control Practice.</b> At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU IDs 12, 13, and 26, including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EU IDs 12, 13, and 26.</p>	In Compliance	Records Review
28	<p><b>NSPS Subpart A Credible Evidence.</b> For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 31 and 33, nothing in 40 C.F.R. Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 12, 13, and 26 would have been in compliance with applicable requirements of 40 C.F.R. Part 60 if the appropriate performance or compliance test or procedure had been performed.</p>	N/A	Advisory Condition
29	<p><b>NSPS Subpart A Concealment of Emissions.</b> The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of a standard set forth in Conditions 31 and 33. 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.</p>	In Compliance	Field Verification/Interview
<b>NSPS Subpart GG – Turbines, EU IDs 12, 13, and 26</b>			
30	<p><b>NSPS Subpart GG Applicability.</b> For EU IDs 12, 13, and 26 listed in Table A, the Permittee shall comply with the applicable requirements for stationary gas turbines, which commenced construction, modification, or reconstruction after October 3, 1977, with a heat input at peak load equal to or greater than 10.7 gigajoules (10 million Btu) per hour based on the lower heating value of the fuel fired.</p>	N/A	Advisory Condition
31	<p><b>NSPS Subpart GG NOx Standard.</b> The Permittee shall not allow the exhaust gas concentration of NOx, on a dry exhaust basis at 15 percent oxygen (O2) and ISO standard day conditions, 14 from EU IDs 12, 13, and 26 listed in Table A to exceed the following limits:</p> <p>31.1. EU ID 12 to exceed 167 ppmv.</p> <p>31.2. EU ID 13 to exceed 173 ppmv.</p> <p>31.3. EU ID 26 to exceed 176 ppmv.</p>	In Compliance	Records Review

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32	<p><b>NSPS Subpart GG NOx MR&amp;R Requirements.</b> The Permittee shall monitor, record, and report compliance with the respective Subpart GG NOx standard under Condition 31, as follows:</p> <p><b>32.1. Monitoring.</b> The Permittee shall comply with the following:</p> <p>a. <b>Periodic Testing.</b> For each turbine subject to Condition 31 that operates for 400 hours or more in any 12-month period during the life of this permit, the Permittee shall satisfy either Conditions 32.1a(i) or 32.1a(ii).</p> <p>(i) For existing turbines whose latest emissions source testing was certified as operating at less than or equal to 90 percent of the most stringent NOx limit shown in Condition 31, the Permittee shall conduct a NOx and O2 source test under 40 C.F.R. 60, Appendix A, Method 20, or Method 7E and either Method 3 or 3A, within the first applicable criteria below:</p> <p>(A) Within 5 years of the latest performance test, or</p> <p>(B) Within 1 year of the effective date of this permit if the last source test occurred greater than five years prior to effective date of this permit and the 400-hour threshold was triggered within 6 months of the permit's effective date, or</p> <p>(C) Within 1 year after exceeding 400 hours of operation in a 12-month period if the last source test occurred greater than 4 years prior to the exceedance.</p> <p>(ii) For existing turbines whose latest emissions source testing was certified as operating at greater than 90 percent of the most stringent NOx limit shown in Condition 31, the Permittee shall conduct a NOx and O2 source test under 40 C.F.R. 60, Appendix A, Method 20, or Method 7E and either Method 3 or 3A, annually until two consecutive tests show performance results certified at less than or equal to 90 percent of the most stringent NOx limit shown in Condition 31.</p>	In Compliance	Records Review
	<p>b. <b>Substituting Test Data.</b> The Permittee may use results of a source test completed under Condition 32.1.a performed on only one of a group of turbines to satisfy the requirements of the condition for the other turbines in the group if</p> <p>(i) the Permittee demonstrates that test results are less than or equal to 90 percent of the most stringent NOx limit shown in Condition 31, and are projected under Condition 32.1.c to be less than or equal to 90 percent of the most stringent limit at maximum load;</p> <p>(ii) for any source test conducted after the effective date of this permit, the Permittee identifies in a source test plan under Condition 65</p> <p>(A) the turbine to be tested;</p> <p>(B) the other turbines in the group that are to be represented by the test; and</p> <p>(C) why the turbine to be tested is representative, including that each turbine in the group</p> <p>(1) is located at a stationary source operated and maintained by the Permittee;</p> <p>(2) is tested under close to identical ambient conditions;</p> <p>(3) is the same make and model and has identical injectors and combustor; and</p> <p>(4) uses the same fuel type from the same supply origin.</p> <p>(iii) The Permittee may not use substitute test results to represent emissions from a turbine or group of turbines if that turbine or group of turbines is operating at greater than 90 percent of the most stringent NOx limit shown in Condition 31.</p>	In Compliance	Records Review
	<p>c. <b>Load.</b> The Permittee shall comply with the following:</p> <p>(i) Conduct all tests under Condition 32.1 in accordance with 40 C.F.R. 60.335, except as otherwise approved in writing by the Department or by EPA if the circumstances of the Department or EPA approval are still valid at the time. For the highest load condition, if it is not possible to operate the turbine during the test at maximum load, the Permittee will test the turbine when operating at the highest load achievable by the turbine under the ambient and stationary source operating conditions in effect at the time of the test.</p> <p>(ii) Demonstrate in the source test plan whether the test is scheduled when maximum NOx emissions are expected.</p> <p>(iii) If the highest operating rate tested is less than the maximum load of the tested turbine or another turbine represented by the test data,</p> <p>(A) for each such turbine the Permittee shall provide to the Department as an attachment to the source test report</p> <p>(1) additional test information from the manufacturer or from previous testing of units in the group of turbines; if using previous testing of the group of turbines, the information must include all available test data for the turbines in the group, and</p> <p>(2) a demonstration based on the additional test information that projects the test results from Condition 32.1 to predict the highest load at which emissions will comply with the respective limit in Condition 31;</p> <p>(B) the Permittee shall not operate any turbine represented by the test data at loads for which the Permittee's demonstration predicts that emissions will exceed the limit in Condition 31;</p>	In Compliance	Records Review

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Permit Condition		Compliance Status	Method Used to Determine Status [40 CFR 71.5(c)(9)]
No.	Summary/Description		
32	<p>32.1.c(iii)(C) the Permittee shall comply with a written finding prepared by the Department that</p> <p>(1) the information is inadequate for the Department to reasonably conclude that compliance is assured at any load greater than the test load, and that the Permittee must not exceed the test load;</p> <p>(2) the highest load at which the information is adequate for the Department to reasonably conclude that compliance assured is less than maximum load, and the Permittee must not exceed the highest load at which compliance is predicted, or</p> <p>(3) the Permittee must retest during a period of greater expected demand on the turbine; and</p> <p>(D) the Permittee may revise a load limit by submitting results of a more recent Method 20, or Method 7E and either Method 3 or 3A, test done at a higher load and, if necessary, the accompanying information and demonstration described in Condition 32.1c(iii)(A); the new limit is subject to any new Department finding under Condition 32.1c(iii)(C).</p> <p>(iv) In order to perform a source test required under Condition 32.1, the Permittee may operate a turbine at a higher load than that prescribed by Condition 32.1.c(iii).</p> <p>(v) For the purposes of Conditions 32.1 through 32.3, maximum load means the hourly average load that is the smallest of</p> <p>(A) 100 percent of manufacturer's design capacity of the gas turbine at ISO standard day conditions;</p> <p>(B) the highest load allowed by an enforceable condition that applies to the turbine; or</p> <p>(C) the highest load possible considering permanent physical restraints on the turbine or the equipment which it powers.</p>	In Compliance	Records Review
	<p>32.2. <b>Recordkeeping.</b> The Permittee shall keep records as follows:</p> <p>a. The Permittee shall comply with the following for each turbine for which a demonstration under Condition 32.1.c(iii) does not show compliance with any of the limits in Condition 31 at maximum load.</p> <p>(i) The Permittee shall keep records of</p> <p>(A) load; or</p> <p>(B) as approved by the Department, surrogate measurements for load and the method for calculating load from those measurements.</p> <p>(ii) Records in Condition 32.2.a shall be hourly or otherwise as approved by the Department.</p> <p>(iii) Within one month after submitting a demonstration under Condition 32.1.c(iii)(A)(2) that predicts that the highest load at which emissions will comply is less than maximum load, or within one month of a Department finding under Condition 32.1.c(iii)(C), whichever is earlier, the Permittee shall propose to the Department how load or load surrogates will be measured, and shall propose and comply with a schedule for installing any necessary equipment and beginning monitoring. The Permittee shall comply with any subsequent Department direction on the load monitoring methods, equipment, or schedule.</p> <p>b. For any turbine subject to Condition 31, that will operate less than 400 hours in any 12 consecutive months, the Permittee shall keep monthly records of the hours of operation.</p>	In Compliance	Records Review
	<p>32.3. <b>Reporting.</b> The Permittee shall report as follows:</p> <p>a. In each operating report under Condition 74 the Permittee shall list for each turbine tested or represented by testing at less than maximum load and for which the Permittee must limit load under Condition 32.1.c(iii)</p> <p>(i) the load limit;</p> <p>(ii) the turbine identification; and</p> <p>(iii) the highest load recorded under Condition 32.2.a during the period covered by the operating report.</p> <p>b. In each operating report under Condition 74 for each turbine for which Condition 32.1 has not been satisfied because the turbine normally operates less than 400 hours in any 12 consecutive months, the Permittee shall identify</p> <p>(i) the turbine;</p> <p>(ii) the highest number of operating hours for any 12 consecutive months ending during the period covered by the report; and</p> <p>(iii) any turbine that operated for 400 or more hours.</p> <p>c. The Permittee shall report under Condition 73 if</p> <p>(i) a test result exceeds the emission standard;</p> <p>(ii) Method 20, or Method 7E and either Method 3 or 3A, testing is required under Condition 32.1.a(i) or 32.1.a(ii) but not performed, or</p> <p>(iii) the turbine was operated at a load exceeding that allowed by Conditions 32.1.c(iii)(B) and 32.1.c(iii)(C); exceeding a load limit is deemed a single violation rather than a multiple violation of both monitoring and the underlying emission limit.</p>	In Compliance	Records Review
33	<p><b>NSPS Subpart GG SO<sub>2</sub> Standard.</b> For EU IDs 12, 13, and 26, the Permittee shall not burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 wt% S<sub>fuel</sub> (8000 ppmw).</p>	In Compliance	Records Review

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Permit Condition		Compliance Status	Method Used to Determine Status [40 CFR 71.5(c)(9)]
No.	Summary/Description		
34	<p><b>NSPS Subpart GG SO2 MR&amp;R Requirements.</b> The Permittee shall monitor, record, and report compliance with the applicable Subpart GG SO2 standard in Condition 33, as follows:</p> <p><b>34.1. Monitoring.</b> The Permittee shall monitor compliance with the Subpart GG SO2 standard in Condition 33, as follows:</p> <p>a. Monitor the total sulfur content of the fuel being fired in the turbine, except as provided in Condition 34.1.b. Determine the sulfur content of the fuel using total sulfur methods described in Condition 34.2. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), the Permittee may use ASTM D4084-82, 94, D5504-01, D6228-98, or Gas Processors Association Standard 2377-86 (all of which are incorporated by reference-see 40 C.F.R. 60.17), which measure the major sulfur compounds.</p> <p>b. The Permittee may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in 40 C.F.R. 60.331(u), 15 regardless of whether an existing custom schedule approved by the Administrator requires such monitoring. The Permittee shall use the following source of information to make the required demonstration:</p> <p>(i) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or</p> <p>(ii) Representative fuel sampling data, which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in 40 C.F.R. 75, Appendix D, Section 2.3.1.4 or 2.3.2.4 is required.</p>	In Compliance	Records Review
	<p>c. For any turbine that commenced construction, reconstruction or modification after October 3, 1977, but before July 8, 2004, and for which a custom fuel monitoring schedule has previously been approved, the owner or operator may, without submitting a special petition to the Administrator, continue monitoring on this schedule.</p> <p>d. The frequency of determining the sulfur content of the fuel is as follows:</p> <p>(i) <i>Gaseous fuel.</i> For owners and operators that elect not to demonstrate sulfur content using options in Condition 34.1.b, and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day.</p> <p>(ii) <i>Custom schedules.</i> Notwithstanding the requirements of Condition 34.1.d(i), operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in 40 C.F.R. 60.334(i)(3)(i) and (i)(3)(ii), custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in Condition 33. The two custom sulfur monitoring schedules set forth in 40 C.F.R. 60.334(i)(3)(i)(A) through (D) and 60.334(i)(3)(ii) are acceptable without prior Administrative approval.</p>	In Compliance	Records Review
	<p><b>34.2. Test Methods and Procedures.</b> If the owner or operator is required under Condition 34.1.d to periodically determine the sulfur content of the fuel combusted in the turbine, the owner or operator shall analyze the samples for the total sulfur content of the fuel as follows:</p> <p>a. For gaseous fuels, use ASTM D1072-80, 90 (Reapproved 1994); D3246-81, 92, 96; D4468-85 (Reapproved 2000); or D6667-01 (all of which are incorporated by reference, see 40 C.F.R. 60.17). The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the prior approval of the Administrator.</p> <p>b. The fuel analyses may be performed by the owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency.</p>	In Compliance	Records Review
	<p><b>34.3. Recordkeeping.</b> The Permittee shall keep records as required by Conditions 34.1 and 34.2, and in accordance with Condition 69.</p>	In Compliance	Records Review
	<p><b>34.4. Reporting.</b> The Permittee shall report as follows:</p> <p>a. For each affected unit monitored periodically to determine the fuel sulfur content under Condition 34.1.a, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 C.F.R. 60.7(c) as summarized in Condition 24, except where otherwise approved by a custom fuel monitoring schedule. Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under Condition 24, periods of excess emissions and monitor downtime that shall be reported are defined as follows:</p> <p>(i) For samples of gaseous fuel obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.</p> <p>(ii) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample.</p> <p>b. If electing to comply with Condition 34.1.b, the Permittee shall include with the operating report under Condition 74 a certified statement indicating that the fuel gas combusted at the stationary source meets the definition of natural gas in 40 C.F.R. 60.331(u), pursuant to 40 C.F.R. 60.334(h)(3).</p>	In Compliance	Records Review

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Permit Condition		Compliance Status	Method Used to Determine Status [40 CFR 71.5(c)(9)]
No.	Summary/Description		
<b>40 C.F.R. Part 63 National Emission Standards for Hazardous Air Pollutants (NESHAP)</b>			
<b>NESHAP Subpart A - General Provisions</b>			
35	<b>NESHAP Subpart A Applicability.</b> The Permittee shall comply with the applicable requirements of 40 C.F.R. 63 Subpart A in accordance with the provisions for applicability of Subpart A in Table 8 to NESHAP Subpart ZZZZ for EU IDs 20 through 24 listed in Table A.	In Compliance	Records Review
<b>NESHAP Subpart ZZZZ – Stationary RICE, EU IDs 20 through 24</b>			
36	<b>NESHAP Subpart ZZZZ Applicability.</b> For EU IDs 20 through 24 listed in Table A, the Permittee shall comply with the applicable requirements for existing stationary reciprocating internal combustion engine (RICE) located at an area source of HAP emissions. The Permittee shall at all times comply with Conditions 37 through 40.	In Compliance	Records Review
37	<b>NESHAP Subpart ZZZZ GAPCP Operation and Maintenance Requirements.</b> The Permittee shall comply with the following: 37.1. At all times, operate and maintain EU IDs 20 through 24, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of EU IDs 20 through 24. 37.2. The Permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to either: a. the manufacturer's emission-related written operation and maintenance instructions; or b. a maintenance plan developed by the Permittee which must provide, to the extent practicable, for the maintenance and operation of the engine(s) in a manner consistent with good air pollution control practice for minimizing emissions. 37.3. Minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes	In Compliance	Records Review
38	<b>NESHAP Subpart ZZZZ Work and Management Practices Standards.</b> For EU IDs 20 through 24, the Permittee shall comply with the following work and management practices: 38.1. Except during periods of startup, the Permittee shall meet the following requirements: a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first, except as allowed by Condition 38.4; b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. 38.2. During periods of startup, the Permittee shall comply with Condition 37.3. 38.3. Demonstrate continuous compliance with the requirements in Conditions 38.1 and 38.2 by complying with Condition 37.2. 38.4. The Permittee has the option to utilize an oil analysis program in order to extend the specified oil change requirement in Condition 38.1.a, as described below: a. The oil analysis must be performed at the same frequency specified for changing the oil in Condition 38.1.a. b. The analysis program must, at a minimum, analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: (i) Total Base Number is less than 30 percent of the Total Base Number of the oil when new; (ii) viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or (iii) percent water content (by volume) is greater than 0.5.	In Compliance	Records Review
	c. If all of the condemning limits in Conditions 38.4.b(i) through 38.4.b(iii) are not exceeded, the Permittee is not required to change the oil. d. If any of the limits in Conditions 38.4.b(i) through 38.4.b(iii) is exceeded, the Permittee must change the oil within 2 business days of receiving the results of the analysis. (i) If the engine is not in operation when the results of the analysis are received, the Permittee must change the oil within 2 business days or before commencing operation, whichever is later. e. The analysis program must be part of the maintenance plan for the engine.	In Compliance	Records Review
39	<b>NESHAP Subpart ZZZZ Recordkeeping Requirements.</b> The Permittee shall keep records, as follows: 39.1. If electing to operate and maintain EU IDs 20 through 24 according to a maintenance plan developed by the Permittee as allowed under Condition 37.2.b, keep records of the maintenance conducted on EU IDs 20 through 24 in order to demonstrate that the stationary RICE and after-treatment control device (if any) are operated and maintained according to the maintenance plan. 39.2. If electing to utilize the oil analysis program described in Condition 38.4, keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. 39.3. Keep records in a form suitable and readily available for expeditious review. Keep each record in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 C.F.R. 63.10(b)(1), except that all records may be retained off site.	In Compliance	Records Review

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Permit Condition		Compliance Status	Method Used to Determine Status
No.	Summary/Description		[40 CFR 71.5(c)(9)]
40	<b>NESHAP Subpart ZZZZ Reporting Requirements.</b> The Permittee shall report, as follows: 40.1. Include in the operating report required by Condition 74 a report of all deviations as defined in 40 C.F.R. 63.6675 and of each instance in which an applicable requirement in 40 C.F.R. 63, Subpart A (Table 8 to Subpart ZZZZ) was not met. 40.2. Notify the Department in accordance with Condition 73 if any of the requirements in Conditions 35 through 40 were not met.	In Compliance	Records Review
<b>40 C.F.R. Part 61 NESHAP</b>			
<b>Subpart A (General Provisions) and Subpart M (Asbestos)</b>			
41	The Permittee shall comply with the applicable requirements set forth in 40 C.F.R. 61.145, 61.150, and 61.152 of Subpart M, and the applicable sections set forth in 40 C.F.R. 61, Subpart A and Appendix A.	In Compliance	Field Verification/Interview
<b>40 C.F.R. Part 82 Protection of Stratospheric Ozone</b>			
42	<b>Subpart F – Recycling and Emissions Reduction.</b> The Permittee shall comply with the applicable standards for recycling and emission reduction of refrigerants set forth in 40 C.F.R. 82, Subpart F.	In Compliance	Field Verification/Interview
43	<b>Subpart G – Significant New Alternatives.</b> The Permittee shall comply with the applicable prohibitions set out in 40 C.F.R. 82.174 (Protection of Stratospheric Ozone Subpart G – Significant New Alternatives Policy Program).	In Compliance	Field Verification/Interview
44	<b>Subpart H – Halons Emissions Reduction.</b> The Permittee shall comply with the applicable prohibitions set out in 40 C.F.R. 82.270 (Protection of Stratospheric Ozone Subpart H – Halon Emission Reduction).	In Compliance	Field Verification/Interview
<b>40 C.F.R. 63 NESHAP Applicability Determinations</b>			
45	The Permittee shall determine rule applicability and designation of affected sources under National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories (40 C.F.R. 63) in accordance with the procedures described in 40 C.F.R. 63.1(b). 45.1. If an owner or operator of a stationary source who is in the relevant source category determines that the source is not subject to a relevant standard or other requirement established under 40 C.F.R. 63, the owner or operator must keep a record as specified in 40 C.F.R. 63.10(b)(3). 45.2. If a source becomes affected by an applicable subpart of 40 C.F.R. 63, the owner or operator shall comply with such standard by the compliance date established by the Administrator in the applicable subpart, in accordance with 40 C.F.R. 63.6(c). 45.3. After the effective date of any relevant standard promulgated by the Administrator under this part, an owner or operator who constructs a new affected source that is not major-emitting or reconstructs an affected source that is not major-emitting that is subject to such standard, or reconstructs a source such that the source becomes an affected source subject to the standard, must notify the Administrator and the Department of the intended construction or reconstruction. The notification must be submitted in accordance with the procedures in 40 C.F.R. 63.9(b).	In Compliance	Records Review
<b>Section 5. General Conditions</b>			
<b>Standard Terms and Conditions</b>			
46	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
47	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
48	The permit does not convey any property rights of any sort, nor any exclusive privilege.	N/A	Advisory Condition
49	<b>Administration Fees.</b> 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
50	<b>Assessable Emissions.</b> The Permittee shall pay to the Department an annual emission fee based on the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of 50.1. the stationary source's assessable potential to emit of 1,295 TPY; or 50.2. the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon credible evidence of actual annual emissions emitted during the most recent calendar year or another 12-month period approved in writing by the Department, when demonstrated by the most representative of 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

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Permit Condition		Compliance Status	Method Used to Determine Status
No.	Summary/Description		[40 CFR 71.5(c)(9)]
51	<p><b>Assessable Emission Estimates.</b> Emission fees will be assessed as follows:</p> <p>51.1. No later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions via the Department's Air Online Services (AOS) System at <a href="http://dec.alaska.gov/applications/air/airtoolsweb">http://dec.alaska.gov/applications/air/airtoolsweb</a> using the Permittee Portal option and filling out the Emission Fee Estimate form. Alternatively, the report may be submitted by:</p> <p>a. E-mail under a cover letter using <a href="mailto:dec.aq.airreports@alaska.gov">dec.aq.airreports@alaska.gov</a>; or</p> <p>b. hard copy to the following address: ADEC Air Permits Program, ATTN: Assessable Emissions Estimate, 555 Cordova Street, Anchorage, Alaska 99501.</p> <p>51.2. The Permittee shall include with the assessable emissions report all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates.</p> <p>51.3. If no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in Condition 50.1.</p>	In Compliance	Records Review
52	<p><b>Good Air Pollution Control Practice.</b> The Permittee shall do the following for EU IDs 1, 2, 5 through 10, 16, 17, 25 and EU IDs K1 through K7:</p> <p>52.1. perform regular maintenance considering the manufacturer's or the operator's maintenance procedures;</p> <p>52.2. keep records of any maintenance that would have a significant effect on emissions; the records may be kept in electronic format; and</p> <p>52.3. keep a copy of either the manufacturer's or the operator's maintenance procedures.</p>	In Compliance	Records Review
53	<p><b>Dilution.</b> 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.</p>	In Compliance	Field Verification/Interview
54	<p><b>Reasonable Precautions to Prevent Fugitive Dust.</b> 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>54.1. 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 54.1 or to address the results of Department inspections that found potential problems; and</p> <p>(ii) to prevent future dust problems.</p> <p>50.2. The Permittee shall report according to Conditions 56.1.e and 56.1.f.</p>	In Compliance	Field Verification/Interview
55	<p><b>Stack Injection.</b> 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
56	<p><b>Air Pollution Prohibited.</b> 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><b>56.1. Monitoring, Recordkeeping, and Reporting:</b></p> <p>a. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 73.</p> <p>b. 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 56.</p> <p>c. 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 56; or</p> <p>(ii) the Department notifies the Permittee that it has found a violation of Condition 56.</p>	In Compliance	Records Review and Field Verification/Interview
	<p>d. The Permittee shall keep records of</p> <p>(i) the date, time, and nature of all emissions complaints received;</p> <p>(ii) the name of the person or persons that complained, if known;</p> <p>(iii) a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 56; and</p> <p>(iv) any corrective actions taken or planned for complaints attributable to emissions from the stationary source.</p>	In Compliance	Records Review and Field Verification/Interview
	<p>e. With each stationary source operating report under Condition 74, the Permittee shall include a brief summary report which must include</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>f. 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>	In Compliance	Records Review and Field Verification/Interview

**Attachment A-1: Compliance Certification**  
Dolly Varden Platform Operating Permit No. AQ0060TVP04  
Title V Renewal Application

Permit Condition		Compliance Status	Method Used to Determine Status
No.	Summary/Description		[40 CFR 71.5(c)(9)]
57	<b>Technology-Based Emission Standard.</b> 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 Conditions 31, 33, or 42 (refrigerants), the Permittee shall 57.1. take all reasonable steps to minimize levels of emissions that exceed the standard; and 57.2. report in accordance with Condition 73.1.b; the report must include information on the steps taken to mitigate emissions and corrective measures taken or to be taken	In Compliance	Records Review
<b>Open Burning Requirements</b>			
58	<b>Open Burning.</b> The Permittee shall not conduct open burning at the stationary source.	In Compliance	Field Verification/Interview
<b>Section 6. General Source Testing and Monitoring Requirements</b>			
59	<b>Requested Source Tests.</b> 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.	In Compliance	Records Review
60	<b>Operating Conditions.</b> Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing 60.1. at a point or points that characterize the actual discharge into the ambient air; and 60.2. 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.	In Compliance	Records Review
61	<b>Reference Test Methods.</b> The Permittee shall use the following test methods when conducting source testing for compliance with this permit: 61.1. Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60. 61.2. Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 C.F.R. 63. 61.3. Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Reference Method 9. The Permittee may use the form in Section 11 to record data. 61.4. Source testing for emissions of PM2.5 and PM10, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A. 61.5. Source testing for emissions of PM10 and PM2.5 must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202. 61.6. Source testing for emissions of any pollutant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.	In Compliance	Records Review
62	<b>Excess Air Requirements.</b> 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).	N/A	Advisory Condition
63	<b>Test Exemption.</b> The Permittee is not required to comply with Conditions 65, 66, and 67 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 2.2).	N/A	Advisory Condition
64	<b>Test Deadline Extension.</b> 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.	In Compliance	Records Review
65	<b>Test Plans.</b> Except as provided in Condition 63, 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 59 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 done without resubmitting the plan.	In Compliance	Records Review
66	<b>Test Notification.</b> Except as provided in Condition 63, 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.	In Compliance	Records Review
67	<b>Test Reports.</b> Except as provided in Condition 63, 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 70. If requested in writing by the Department, the Permittee must provide preliminary results in a shorter period of time specified by the Department.	In Compliance	Records Review
68	<b>Particulate Matter Calculations.</b> In source testing for compliance with the particulate matter standards in Conditions 6 and 21.2, the three-hour average is determined using the average of three one-hour test runs.	In Compliance	Records Review

**Attachment A-1: Compliance Certification**  
Dolly Varden Platform Operating Permit No. AQ0060TVP04  
Title V Renewal Application

Permit Condition		Compliance Status	Method Used to Determine Status [40 CFR 71.5(c)(9)]
No.	Summary/Description		
<b>Section 7. General Recordkeeping and Reporting Requirements</b>			
<b>Recordkeeping Requirements</b>			
69	The Permittee shall keep all records required by this permit for at least five years after the date of collection, including: 69.1. Copies of all reports and certifications submitted pursuant to this section of the permit; and 69.2. 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.	In Compliance	Records Review
<b>Reporting Requirements</b>			
70	<b>Certification.</b> 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. 70.1. The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if a. a certifying authority registered under AS 09.80.020 verifies that the electronic signature is authentic; and b. the person providing the electronic signature has made an agreement, with the certifying authority described in Condition 70.1a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.	In Compliance	Records Review
71	<b>Submittals.</b> Unless otherwise directed by the Department or this permit, the Permittee shall submit one certified copy of reports, compliance certifications, and/or other submittals required by this permit. The Permittee may submit the documents by hard copy or electronically, as follows: 71.1. Submit hard copy to the following address: ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician. 71.2. Provide electronic submittals either by: a. using the Department's Air Online Services (AOS) system at <a href="http://dec.alaska.gov/applications/air/airtoolsweb/">http://dec.alaska.gov/applications/air/airtoolsweb/</a> using the Permittee Portal option; or b. an email, under a cover letter, addressed to <a href="mailto:dec.aq.airreports@alaska.gov">dec.aq.airreports@alaska.gov</a> .	In Compliance	Records Review
72	<b>Information Requests.</b> 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.	In Compliance	Records Review
73	<b>Excess Emissions and Permit Deviation Reports.</b> 73.1. Except as provided in Condition 56, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows: a. In accordance with 18 AAC 50.240(c), as soon as possible after the event commences or is discovered, report (i) emissions that present a potential threat to human health or safety; and (ii) excess emissions that the Permittee believes to be unavoidable; b. In accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or non-routine repair that causes emissions in excess of a technology-based emission standard; and c. Report all other excess emissions and permit deviations (i) within 30 days after the end of the month in which the excess emissions or deviation occurred, except as provided in Conditions 73.1.c(ii) and 73.1.c(iii); (ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 73.1.c(i); and (iii) for failure to monitor, as required in Conditions 4.2.b and 9.1.b. 73.2. When reporting excess emissions or permit deviations, the Permittee shall report using either the Department's online form, which can be found at <a href="http://dec.alaska.gov/applications/air/airtoolsweb">http://dec.alaska.gov/applications/air/airtoolsweb</a> using the Permittee Portal option, or if the Permittee prefers, the form contained in Section 13 of this permit. The Permittee must provide all information called for by the form that is used. 73.3. If requested by the Department, the Permittee shall provide a more detailed written report as requested to follow up an excess emissions report.	In Compliance	Records Review
74	<b>Operating Reports.</b> During the life of this permit, the Permittee shall submit to the Department an original and one copy of 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.	In Compliance	Records Review

**Attachment A-1: Compliance Certification**  
Dolly Varden Platform Operating Permit No. AQ0060TVP04  
Title V Renewal Application

Permit Condition		Compliance Status	Method Used to Determine Status
No.	Summary/Description		[40 CFR 71.5(c)(9)]
74	<p>74.1. 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>74.2. If excess emissions or permit deviations that occurred during the reporting period are not reported under Condition 74.1,</p> <p>a. The Permittee shall identify</p> <p>(i) the date of the deviation;</p> <p>(ii) the equipment involved;</p> <p>(iii) the permit condition affected;</p> <p>(iv) a description of the excess emissions or permit deviation; and</p> <p>(v) any corrective action or preventive measures taken and the date of such actions; or</p> <p>b. When excess emissions or permit deviations have already been reported under Condition 73 the Permittee shall cite the date or dates of those reports.</p>	In Compliance	Records Review
	<p>74.3. The operating report must include, for the period covered by the report, a listing of emissions monitored under Conditions 2.2.e and 32.1.a(ii), which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report:</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>74.4. <b>Transition from Expired to Renewed Permit.</b> 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>		
75	<p><b>Annual Compliance Certification.</b> Each year by March 31, the Permittee shall compile and submit to the Department an annual compliance certification report according to Condition 71.</p> <p>75.1. 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>75.2. 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>75.3. In addition, submit a copy of the report directly to the Clean Air Act Compliance Manager, US EPA – Region 10, ATTN: Air Toxics and Enforcement Section, Mail Stop: 20-C04, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101-3188.</p>	In Compliance	Records Review
76	<p><b>Emission Inventory Reporting.</b> The Permittee shall submit to the Department reports of actual emissions for the previous calendar year, by emissions unit, of CO, NH<sub>3</sub>, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, VOCs and Lead (Pb) (and lead compounds) for the previous calendar year using the form in Section 14 of this permit, as follows:</p> <p>76.1. 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 TPY of NH<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> or VOCs; or</p> <p>b. 2,500 TPY of CO, NO<sub>x</sub> or SO<sub>2</sub>.</p> <p>76.2. Every third year by April 30, if the stationary source's potential to emit for the previous calendar year (except actual emissions for Pb) equals or exceeds:</p> <p>a. 0.5 TPY of actual Pb, or</p> <p>b. 1,000 TPY of CO; or</p> <p>c. 100 TPY of SO<sub>2</sub>, NH<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub> or VOCs.</p> <p>76.3. For reporting under Condition 76.2, the Permittee shall report in 2021 for calendar year 2020, 2024 for calendar year 2023, etc., in accordance with the Environmental Protection Agency schedule.</p> <p>76.4. Include in the report required by this condition, the required data elements contained within the form in Section 14 or those contained in Tables 2a and 2b of Appendix A to Subpart A of 40 C.F.R. 51 for each stack associated with an emissions unit.</p>	In Compliance	Records Review
77	<p><b>NSPS and NESHAP Reports.</b> The Permittee shall comply with the following:</p> <p>77.1. <b>Reports:</b> 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 74 for the period covered by the report, a copy of any NSPS and NESHAP reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10. For reports previously submitted to ADEC or submitted through CDX/CEDRI, state in the operating report the date and a brief description of each of the reports submitted during the reporting period; and</p> <p>77.2. The Permittee shall keep a copy of each U.S. EPA-issued monitoring waiver or custom monitoring schedule with the permit.</p>	In Compliance	Records Review

**Attachment A-1: Compliance Certification**  
Dolly Varden Platform Operating Permit No. AQ0060TVP04  
Title V Renewal Application

Permit Condition		Compliance Status	Method Used to Determine Status [40 CFR 71.5(c)(9)]
No.	Summary/Description		
<b>Section 8. Permit Changes and Renewal</b>			
78	<b>Permit Applications and Submittals.</b> The Permittee shall comply with the following requirements for submitting application information to the EPA 78.1. 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; 78.2. The information shall be submitted to the Part 70 Operating Permit Program, US EPA – Region 10, Air Permits and Toxics Branch, Mail Stop: 15-H13, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101-3188; 78.3. 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 78.4. The Permittee shall maintain records as necessary to demonstrate compliance with this condition.	In Compliance	Records Review
79	<b>Emissions Trading.</b> 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.	N/A	Advisory Condition
80	<b>Off Permit Changes.</b> The Permittee may make changes that are not addressed or prohibited by this permit other than those subject to the requirements of 40 C.F.R. Part 72 through 78 or those that are modifications under any provision of Title I of the Act to be made without a permit revision, provided that the following requirements are met: 80.1. Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition; 80.2. 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; 80.3. The change shall not qualify for the shield under 40 C.F.R. 71.6(f); and 80.4. 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.	In Compliance	Records Review
81	<b>Operational Flexibility.</b> The Permittee may make Section 502(b)(10) changes within the permitted stationary source without requiring a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions). 81.1. The Permittee shall provide EPA and the Department with a notification no less than 7 days in advance of the proposed change. 81.2. For each such change, the written notification required above shall include a brief description of the change within the permitted stationary source, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. 81.3. The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to Condition 81.	In Compliance	Records Review
82	<b>Permit Renewal.</b> To renew this permit, the Permittee shall submit to the Department an application under 18 AAC 50.326 <b>no sooner than October 29, 2023 and no later than October 29, 2024.</b> The renewal application shall be complete before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the stationary source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 C.F.R. 71.7(b) and 71.5(a)(1)(iii).	In Compliance	Records Review
<b>Section 9. Compliance Requirements</b>			
<b>General Compliance Requirements</b>			
83	Compliance with permit terms and conditions is considered to be compliance with those requirements that are 83.1. included and specifically identified in the permit; or 83.2. determined in writing in the permit to be inapplicable.	N/A	Advisory Condition
84	The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14.120(c), 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for 84.1. an enforcement action; 84.2. permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or 84.3. denial of an operating permit renewal application.	N/A	Advisory Condition
85	For applicable requirements with which the stationary source is in compliance, the Permittee shall continue to comply with such requirements.	N/A	Advisory Condition
86	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
87	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

**Attachment A-1: Compliance Certification**  
Dolly Varden Platform Operating Permit No. AQ0060TVP04  
Title V Renewal Application

Permit Condition		Compliance Status	Method Used to Determine Status
No.	Summary/Description		[40 CFR 71.5(c)(9)]
88	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 88.1. enter upon the premises where a source subject to the permit is located or where records required by the permit are kept; 88.2. have access to and copy any records required by the permit; 88.3. inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and 88.4. sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.	In Compliance	Field Verification/Interview

## **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). Dolly Varden Platform was eliminated from the analysis in step two. In the State Air Quality Control Plan Volume II, Section III.K, Appendix III.K.13.F, ADEC states that “ADEC, upon consideration of the former limited analysis, but notwithstanding its outstanding request for an economic overview of SO<sub>2</sub> controls, tentatively concludes that Hilcorp is employing the most practical and effective control regime for their SO<sub>2</sub> emissions at the Dolly Varden Platform stationary source” (see Pages III.K.13.F-30 through 32). Additional information about this ADEC regional haze determination is available on the cited SIP pages.

### **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

<b>Form B:</b>	Emission Unit Listing for This Application
<b>Form B1:</b>	Emission Unit Detail Form – External Combustion Equipment
<b>Form B2:</b>	Emission Unit Detail Form – Internal Combustion Equipment
<b>Form B5:</b>	Emission Unit Detail Form – Miscellaneous Emission Units

**FORM B**  
Emission Unit Listing For This Application

Permit Number:     AQ0060TVP04    

<b>EMISSION UNIT LISTING: New, Modified, Previously Unpermitted, Replaced, Deleted</b>					
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)					
Emission Units To Be MODIFIED By This Application					
10	Solar Saturn T-1200 Turbine	AC #3 Generator Drive	1,200 hp	1970	The turbine is no longer dual fuel-fired because it does not operate on diesel fuel. This is a fuel gas-fired turbine.
Emission Units To Be DELETED By This Application					
1	Solar Saturn T-1200 Turbine	Solar Pump Drive #1	1,200 hp	1969	EU ID 1 has been physically removed from Dolly Varden Platform. EU ID 2 has been physically removed from Dolly Varden Platform. EU ID 8 has been physically removed from Dolly Varden Platform. Permit No. AQ1411MSS01 for the Kuukpik V Drill Rig to be revised to remove Dolly Varden Platform.
2	Solar Saturn T-1200 Turbine	Solar Pump Drive #2	1,200 hp	1969	
8	Solar Saturn T-1200 Turbine	AC #1 Generator Drive	1,200 hp	1969	
K1	Hydraulic Power Unit	Detroit Diesel/ Series DDEC IV Engine <i>Nonroad Engine</i>	850 hp	Rotates on/off source	
K2	Hydraulic Power Unit	Detroit Diesel/ Series DDEC IV Engine <i>Nonroad Engine</i>	850 hp	Rotates on/off source	
K3	Light Plant Generator	Detroit Diesel/ Series 60 Engine <i>Nonroad Engine</i>	600 hp	Rotates on/off source	
K4	Light Plant Generator	Detroit Diesel/ Series 60 Engine <i>Nonroad Engine</i>	600 hp	Rotates on/off source	
K5	Portable Hydraulic Generator	Engine (make/model unknown) <i>Nonroad Engine</i>	101 hp	Rotates on/off source	
K6	Boiler	Volcano Boiler	3.6 MMBtu/hr	Rotates on/off source	
K7	Boiler	Volcano Boiler	3.6 MMBtu/hr	Rotates on/off source	

**FORM B**  
Emission Unit Listing For This Application

<b>SIGNIFICANT EMISSION UNIT LISTING: Title V permitted emission units that have not been modified</b>				
Emission Unit ID Number	Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date
5	Solar Saturn T-1200 Turbine	Solar Pump Drive #5	1,200 hp	1969
6	Solar Saturn T-1200 Turbine	Solar Pump Drive #6	1,200 hp	1969
7	Solar Saturn T-1200 Turbine	Solar Pump Drive #7	1,200 hp	1968
9	Solar Saturn T-1200 Turbine	AC #2 Generator Drive	1,200 hp	1970
12	Solar Centaur T-4500 Turbine	Compressor Drive	4,500 hp	1985
13	Solar Centaur T-5900 Turbine	AC #6 ESP Generator	4,270 kW	2002
16	Bryan Boiler	Glycol Boiler #1	8.5 MMBtu/hr	2006
17	Bryan Boiler	Glycol Boiler #2	8.5 MMBtu/hr	2006
20	Detroit Diesel 8V71 Engine (NE)	East Skagit Crane	350 hp	1989
21	Detroit Diesel 8V71 Engine (SW)	West Skagit Crane	350 hp	1989
22	Detroit Diesel Engine	Fire Pump Drive P-3	405 kW	1994
23	Detroit Diesel Engine	Detroit Backup Generator	400 kW	1994
24	Caterpillar 3306B Engine	Air Compressor Driver	265 bhp	2003
25	Flare (SF/HP/LP) and Pilot	Safety/Operating Flares	570 MMscf/yr	1995
26	Solar Centaur 50 Turbine	AC #7 SoLoNOx Turbine	5.65 MW	2015

**FORM B**  
Emission Unit Listing For This Application

<b>INSIGNIFICANT EMISSION UNIT LISTING: Insignificant Title V permitted emission units that have not been modified</b>				
Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date	Basis for Insignificant Status
Bryan Boiler	Steam Boiler #3	4.2 MMBtu/hr	N/A	18 AAC 50.326(e) – potentials < rates - NSPS Dc – boiler < 10 MMBtu/hr - NESHAP JJJJJ – gas-fired boiler
Burnham PF-510 Boiler #4	MSM Glycol Boiler #4	2.033 MMBtu/hr	N/A	18 AAC 50.326(g)(5) – rating < 4 MMBtu/hr - NSPS Dc – boiler < 10 MMBtu/hr - NESHAP JJJJJ – gas-fired boiler
Burnham PF-510 Boiler #5	MSM Glycol Boiler #5	2.033 MMBtu/hr	N/A	
Hotsy Portable Pressure Washer Burner	Portable Pressure Washer	197 Btu/hr	N/A	18 AAC 50.326(g)(7) – unit < 1.7 MMBtu/hr using No. 2 fuel oil - NSPS Dc – < 10 MMBtu/hr - NESHAP JJJJJ – not a boiler
Portable Heaters	Portable Heaters (Each less than 1.7 MMBtu/hr)	4.0 MMBtu/hr	N/A	
Produced Water Storage Tank	North Subdeck Produced Water Storage Tank	24,900 gallons	Prior to 1984	18 AAC 50.326(e) – potentials < rates - NSPS K, Ka – tank < 40,000 gal - NSPS Kb – construction prior to 7/23/1984
Motor Room Diesel Day Tank	Diesel Storage Tank	860 gallons	N/A	18 AAC 50.326(e) – potentials < rates - NSPS K, Ka – not a petroleum liquid - NSPS Kb – tank < 19,800 gal
Motor Room Diesel Reserve Tank	Diesel Storage Tank	187 gallons	N/A	
Emergency Generator Tanks (2 Tanks)	Diesel Storage Tanks	273 gallons, each	N/A	
MSM Diesel Day Tank	Diesel Storage Tank	215 gallons	N/A	
Sullair Diesel Tank	Diesel Storage Tank	100 gallons	N/A	
Crane Diesel Tanks (2 Tanks)	Diesel Storage Tanks	140 gallons, each	N/A	
Centaur Turbine Oil Tank	Lube Oil Storage Tank	249 gallons	N/A	
Centaur Lube Oil Tank	Lube Oil Storage Tank	330 gallons	N/A	18 AAC 50.326(f)(2) – lube oil storage tank - NSPS K, Ka – tank < 40,000 gal - NSPS Kb – tank < 19,800 gal
Motor Room Hydraulic Oil Tank	Lube Oil Storage Tank	399 gallons	N/A	
Compressor Lube Oil Tanks (2 Tanks)	Lube Oil Storage Tanks	85 gallons, each	N/A	
Paraffin Dispersant Tank	Paraffin Dispersant Storage Tank	750 gallons	N/A	
Demulsifier Tank	Demulsifier Storage Tank	550 gallons	N/A	18 AAC 50.326(g)(2) – tank < 1,100 gal and VP < 550 mmHg - NSPS K, Ka – tank < 40,000 gal - NSPS Kb – tank < 19,800 gal

## FORM B2

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

Permit Number:     AQ0060TVP04    

1.	Emission Unit ID Number // Operating Scenario	EU IDs 5, 6, and 7 // Base Scenario
2.	Date installation/construction commenced <sup>1</sup>	EU IDs 5 and 6 – 1969 EU ID 7 – 1968
3.	Date installed	EU IDs 5 and 6 – 1969 EU ID 7 – 1968
4.	Emission Unit serial number	EU ID 5 – Not Available (V-PM-485A) EU ID 6 – 20555 (V-PM-486A) EU ID 7 – Not Available (V-PM-487A)
5.	Special control requirements? [ if yes, describe]	No
6.	Manufacturer and model number	Solar Saturn T-1200
7.	Type of combustion device	Turbine
8.	Rated design capacity (horsepower rating for engines)	1,200 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

<sup>1</sup> 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 12.9 Mscf/hr, each

12.	Describe any specific modifications to the emission unit that must be addressed in the permit:  None.
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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 <sup>1</sup>	Parameter/Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – 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.
AQ0060TVP04 – Condition 6	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 6.1.
AQ0060TVP04 – Condition 14	18 AAC 50.055(c)	Sulfur Compound Emission Standard	Do not cause or allow sulfur compound emissions, expressed as SO <sub>2</sub> , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14.3 through 14.6.
AQ0060TVP04 – Condition 15.2	AQ0060MSS03, Condition 5	Fuel Gas H <sub>2</sub> S Limits	Comply with the fuel gas H <sub>2</sub> S content limit of 2,000 ppmv H <sub>2</sub> S.	Yes.	Monitor, record, and report in accordance with Conditions 15.3 and 15.4.
AQ0060TVP04 – Condition 52	18 AAC 50.326(j)(3), 50.346(b)(5)	Good Air Pollution Control Practices	Perform regular maintenance considering the manufacturer's 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.	Maintain records in accordance with Conditions 52.2 and 52.3.

<sup>1</sup> 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)

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

Non-Applicable Requirements <sup>1</sup>	Reason for non-applicability and citation/basis
40 CFR 60 Subpart GG	EU IDs 5, 6, and 7 were not constructed, modified, or reconstructed after October 3, 1977.
40 CFR 60 Subpart KKKK	EU IDs 5, 6, and 7 were not constructed, modified, or reconstructed after February 18, 2005.

<sup>1</sup> 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:     AQ0060TVP04    

1.	Emission Unit ID Number // Operating Scenario	EU ID 9 // Base Scenario
2.	Date installation/construction commenced <sup>1</sup>	EU ID 9 - 1970
3.	Date installed	EU ID 9 - 1970
4.	Emission Unit serial number	EU ID 9 – 21402 (V-PM-0022)
5.	Special control requirements? [ if yes, describe]	No
6.	Manufacturer and model number	Solar Saturn T-1200
7.	Type of combustion device	Turbine
8.	Rated design capacity (horsepower rating for engines)	1,200 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

- <sup>1</sup>. 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 14.4 Mscf/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit:  None.
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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 <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – 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.
AQ0060TVP04 – Condition 6	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 6.1.
AQ0060TVP04 – Condition 14	18 AAC 50.055(c)	Sulfur Compound Emission Standard	Do not cause or allow sulfur compound emissions, expressed as SO <sub>2</sub> , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14.3 through 14.6.
AQ0060TVP04 – Condition 15.2	AQ0060MSS03, Condition 5	Fuel Gas H <sub>2</sub> S Limits	Comply with the fuel gas H <sub>2</sub> S content limit of 2,000 ppmv H <sub>2</sub> S.	Yes.	Monitor, record, and report in accordance with Conditions 15.3 and 15.4.
AQ0060TVP04 – Conditions 52	18 AAC 50.326(j)(3), 50.346(b)(5)	Good Air Pollution Control Practices	Perform regular maintenance considering the manufacturer’s 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.	Maintain records in accordance with Conditions 52.2 through 52.3.

<sup>1</sup> 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)

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

Non-Applicable Requirements <sup>1</sup>	Reason for non-applicability and citation/basis
40 CFR 60 Subpart GG	EU ID 9 was not constructed, modified, or reconstructed after October 3, 1977.
40 CFR 60 Subpart KKKK	EU ID 9 was not constructed, modified, or reconstructed after February 18, 2005.

<sup>1</sup> 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)

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Permit Number:     AQ0060TVP04    

1.	Emission Unit ID Number // Operating Scenario	EU ID 10 // Base Scenario
2.	Date installation/construction commenced <sup>1</sup>	1970
3.	Date installed	1970
4.	Emission Unit serial number	32630 (V-PM-0023)
5.	Special control requirements? [ if yes, describe]	No
6.	Manufacturer and model number	Solar Saturn T-1200
7.	Type of combustion device	Turbine
8.	Rated design capacity (horsepower rating for engines)	1,200 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

- <sup>1</sup>. 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 14.4 Mscf/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit:  None.
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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 <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – 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 and 13.  Note: EU ID 10 is no longer capable of burning liquid fuel.
AQ0060TVP04 – Condition 6	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 6.2, 7, 8, 9, and 13.
AQ0060TVP04 – Condition 14	18 AAC 50.055(c)	Sulfur Compound Emission Standard	Do not cause or allow sulfur compound emissions, expressed as SO <sub>2</sub> , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14.1, and 14.3 through 14.6.
AQ0060TVP04 – Condition 15.2	AQ0060MSS03, Condition 5	Fuel Gas H <sub>2</sub> S Limits	Comply with the fuel gas H <sub>2</sub> S content limit of 2,000 ppmv H <sub>2</sub> S.	Yes.	Monitor, record, and report in accordance with Conditions 15.3 and 15.4.
AQ0060TVP04 – Condition 16.1	Permit to Operate No. 9423-AA012 Amendment #1, Condition 9 and Exhibit D	Liquid Fuel Sulfur Content	Comply with the liquid fuel sulfur content limit of 0.5% sulfur.	Yes	Monitor, record, and report in accordance with Conditions 16.2 and 16.3,  Note: EU ID 10 is no longer capable of burning liquid fuel.
AQ0060TVP04 – Conditions 52	18 AAC 50.326(j)(3), 50.346(b)(5)	Good Air Pollution Control Practices	Perform regular maintenance considering the manufacturer's 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.	Maintain records in accordance with Conditions 52.2 through 52.3.

<sup>1</sup> 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)

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

Non-Applicable Requirements <sup>1</sup>	Reason for non-applicability and citation/basis
40 CFR 60 Subpart GG	EU ID 10 was not constructed, modified, or reconstructed after October 3, 1977.
40 CFR 60 Subpart KKKK	EU ID 10 was not constructed, modified, or reconstructed after February 18, 2005.

<sup>1</sup> 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:     AQ0060TVP04    

1.	Emission Unit ID Number // Operating Scenario	EU ID 12 // Base Scenario
2.	Date installation/construction commenced <sup>1</sup>	1985
3.	Date installed	1985
4.	Emission Unit serial number	1955C41H (V-PM-003A)
5.	Special control requirements? [ if yes, describe]	No
6.	Manufacturer and model number	Solar Centaur T-4500
7.	Type of combustion device	Turbine
8.	Rated design capacity (horsepower rating for engines)	4,500 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

- <sup>1</sup>. 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 40.3 Mscf/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit:  None.
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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 <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – 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.
AQ0060TVP04 – Condition 6	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 6.1.
AQ0060TVP04 – Condition 14	18 AAC 50.055(c)	Sulfur Compound Emission Standard	Do not cause or allow sulfur compound emissions, expressed as SO <sub>2</sub> , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14.3 through 14.6.
AQ0060TVP04 – Condition 15.2	AQ0060MSS03, Condition 5	Fuel Gas H <sub>2</sub> S Limits	Comply with the fuel gas H <sub>2</sub> S content limit of 2,000 ppmv H <sub>2</sub> S.	Yes.	Monitor, record, and report in accordance with Conditions 15.3 and 15.4.
AQ0060TVP04 – Condition 23	40 CFR 60.7(b), Subpart A	NSPS Subpart A Startup, Shutdown & Malfunction Requirements	Maintain records of the occurrence and duration of any start-up, shutdown, or malfunction.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Conditions 24 & 25	40 CFR 60.7(c) & (d), Subpart A	NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report/Summary Report	Submit an excess emissions and monitoring systems performance report and/or summary report form to the Administrator semiannually.	Yes.	Report in accordance with Conditions 24.1 through 24.4, 25.1, and 25.2.

## FORM B2

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

Permit and Condition Number	Applicable Requirement Citation <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – Condition 26	40 CFR 60.8(a), Subpart A	NSPS Subpart A Performance (Source) Tests	Conduct source tests as required and provide a written report.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 27	40 CFR 60.11(d), Subpart A	NSPS Subpart A Good Air Pollution Control Practices	At all times, including periods of startup, shutdown, and malfunction, maintain and operate units in a manner consistent with good air pollution control practice for minimizing emissions.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 28	40 CFR 60.11(g), Subpart A	NSPS Subpart A Credible Evidence	For submitting compliance certifications or establishing a violation, nothing in 40 CFR 60 shall preclude the use of any credible evidence or information relevant to whether units would have been in compliance if the appropriate test or procedure had been performed.	N/A	Advisory Condition.
AQ0060TVP04 – 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.
AQ0060TVP04 – Conditions 30	40 CFR 60.330(a) & (b), Subpart GG	NSPS Subpart GG Applicability	Comply with the applicable requirements for stationary gas turbines.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 31	40 CFR 60.332(a)(2) & (c), Subpart GG	NSPS Subpart GG NO <sub>x</sub> Standard	Do not allow the exhaust gas concentration of NO <sub>x</sub> , on a dry basis at 15 percent oxygen and ISO standard day conditions to exceed 167 ppmv.	Yes.	Monitor, record, and report in accordance with Condition 32.
AQ0060TVP04 – Condition 33	40 CFR 60.333(b), Subpart GG	NSPS Subpart GG SO <sub>2</sub> Standard	Do not burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 wt% <sub>fuel</sub> (8000 ppmw).	Yes.	Monitor, record, and report in accordance with Condition 34.

<sup>1</sup> 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)

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

Non-Applicable Requirements <sup>1</sup>	Reason for non-applicability and citation/basis
40 CFR 60 Subpart KKKK	EU ID 12 was not constructed, modified, or reconstructed after February 18, 2005.

<sup>1</sup> 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:     AQ0060TVP04    

1.	Emission Unit ID Number // Operating Scenario	EU ID 13 // Base Scenario
2.	Date installation/construction commenced <sup>1</sup>	2002
3.	Date installed	2002
4.	Emission Unit serial number	OHE14-H2702 (V-PM-6370)
5.	Special control requirements? [ if yes, describe]	No
6.	Manufacturer and model number	Solar Centaur T-5900
7.	Type of combustion device	Turbine
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)	4,270 kW

<sup>1</sup>. 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 50.5 Mscf/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit:  None.
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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 <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – 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.
AQ0060TVP04 – Condition 6	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 6.1.
AQ0060TVP04 – Condition 14	18 AAC 50.055(c)	Sulfur Compound Emission Standard	Do not cause or allow sulfur compound emissions, expressed as SO <sub>2</sub> , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14.3 through 14.6.
AQ0060TVP04 – Condition 15.1	AQ0060MSS03, Condition 5	Fuel Gas H <sub>2</sub> S Limits	Comply with the fuel gas H <sub>2</sub> S content limit of 1,000 ppmv H <sub>2</sub> S.	Yes.	Monitor, record, and report in accordance with Conditions 15.3 and 15.4.
AQ0060TVP04 – Condition 23	40 CFR 60.7(b), Subpart A	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of the occurrence and duration of any start-up, shutdown, or malfunction.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Conditions 24 & 25	40 CFR 60.7(c) & (d), Subpart A	NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report & Summary Report	Submit an excess emissions and monitoring systems performance report and/or summary report form to the Administrator semiannually.	Yes.	Report in accordance with Conditions 24.1 through 24.4, 25.1, and 25.2.
AQ0060TVP04 – Condition 26	40 CFR 60.8(a), Subpart A	NSPS Subpart A Performance (Source) Tests	Conduct source tests as required and provide a written report.	Yes.	Annual Compliance Audit.

## FORM B2

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

Permit and Condition Number	Applicable Requirement Citation <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – Condition 27	40 CFR 60.11(d), Subpart A	NSPS Subpart A Good Air Pollution Control Practices	At all times, including periods of startup, shutdown, and malfunction, maintain and operate units in a manner consistent with good air pollution control practice for minimizing emissions.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 28	40 CFR 60.11(g), Subpart A	NSPS Subpart A Credible Evidence	For submitting compliance certifications or establishing a violation, nothing in 40 CFR 60 shall preclude the use of any credible evidence or information relevant to whether units would have been in compliance if the appropriate test or procedure had been performed.	N/A	Advisory Condition.
AQ0060TVP04 – 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.
AQ0060TVP04 – Conditions 30	40 CFR 60.330(a) & (b), Subpart GG	NSPS Subpart GG Applicability	Comply with the applicable requirements for stationary gas turbines.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 31	40 CFR 60.332(a)(2) & (c), Subpart GG	NSPS Subpart GG NO <sub>x</sub> Standard	Do not allow the exhaust gas concentration of NO <sub>x</sub> , on a dry basis at 15 percent oxygen and ISO standard day conditions to exceed 173 ppmv.	Yes.	Monitor, record, and report in accordance with Condition 32.
AQ0060TVP04 – Condition 33	40 CFR 60.333(b), Subpart GG	NSPS Subpart GG SO <sub>2</sub> Standard	Do not burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 wt% <sub>fuel</sub> (8000 ppmw).	Yes.	Monitor, record, and report in accordance with Condition 34.

<sup>1</sup> 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)

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

Non-Applicable Requirements <sup>1</sup>	Reason for non-applicability and citation/basis
40 CFR 60 Subpart KKKK	EU ID 13 was not constructed, modified, or reconstructed after February 18, 2005.

<sup>1</sup> 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:     AQ0060TVP04    

1.	Emission Unit ID Number // Operating Scenario	EU IDs 16 and 17 // Base Scenario
2.	Date installation/construction commenced	2006
3.	Date installed	2006
4.	Emission Unit serial number	EU ID 16 – Not Available (V-B-0001) EU ID 17 – Not Available (V-B-0002)
5.	Special control requirements? [if yes, describe]	No
6.	Manufacturer	Bryan Boilers
7.	Description of emission unit, including type of boiler/heater and firing method:  Fuel Gas-Fired Glycol Boiler	
8.	Rated design capacity (heat input, MMBtu/hr)	8.5 MMBtu/hr, each
9.	Maximum steam production rate (lbs/hr)	Unknown
10.	Maximum steam pressure (psi)	Unknown
11.	Maximum steam temperature (°F)	Unknown

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

Fuel	Maximum hourly firing rate (specify units)
Fuel Gas	Approximately 8.5 Mscf/hr, each

13.	Is waste heat utilized for any purpose? If yes, describe:  No.
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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 <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standards	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.
AQ0060TVP04 – Condition 6	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standards	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 6.1.
AQ0060TVP04 – Condition 14	18 AAC 50.055(c)	Sulfur Compound Emission Standards	Do not cause or allow sulfur compound emissions, expressed as SO <sub>2</sub> , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14.3 through 14.6.
AQ0060TVP04 – Condition 15.2	AQ0060MSS03, Condition 5	Fuel Gas H <sub>2</sub> S Limits	Comply with the fuel gas H <sub>2</sub> S content limit of 2,000 ppmv H <sub>2</sub> S.	Yes.	Monitor, record, and report in accordance with Conditions 15.3 and 15.4.
AQ0060TVP04 – Conditions 52	18 AAC 50.326(j)(3), 50.346(b)(5)	Good Air Pollution Control Practice	Perform regular maintenance considering the manufacturer's 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.	Maintain records in accordance with Conditions 52.1 through 52.3.

<sup>1</sup> 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)

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

Non-Applicable Requirements <sup>1</sup>	Reason for non-applicability and citation/basis
40 CFR 60 Subpart Dc	The heat input capacity for each unit, with the existing burner configuration, is less than 10 MMBtu/hr.
40 CFR 63 Subpart JJJJJ	EU IDs 16 and 17 are gas-fired boilers.

<sup>1</sup> 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)

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Permit Number:     AQ0060TVP04    

1.	Emission Unit ID Number // Operating Scenario	EU IDs 20 and 21 // Base Scenario
2.	Date installation/construction commenced <sup>1</sup>	1989
3.	Date installed	1989
4.	Emission Unit serial number	EU ID 20 – 8VA19756NT733510 (V-PM-0122) EU ID 21 – 8RA452946NT735221 (V-PM-0121)
5.	Special control requirements? [ if yes, describe]	No
6.	Manufacturer and model number	Detroit Diesel 8V71
7.	Type of combustion device	Crane Engines
8.	Rated design capacity (horsepower rating for engines)	350 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

- <sup>1</sup> 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 17.9 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit:  None.
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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 <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standards	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.
AQ0060TVP04 – Condition 6	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standards	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 6.3.
AQ0060TVP04 – Condition 14	18 AAC 50.055(c)	Sulfur Compound Emission Standards	Do not cause or allow sulfur compound emissions, expressed as SO <sub>2</sub> , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 14.1.
AQ0060TVP04 – Condition 15.2	Permit to Operate No. 9423-AA012 Amendment #1, Condition 9 and Exhibit D	Liquid Fuel Sulfur Content	Comply with the liquid fuel sulfur content limit of 0.5% sulfur.	Yes	Monitor, record, and report in accordance with Conditions 16.2 and 16.3.
AQ0060TVP04 – Condition 19.1	Permit to Operate No. 9423-AA012 Amendment #1, Conditions 5 through 7	Operating Hour Limits	Do not exceed 3,000 operating hours, each, during any consecutive 12-month period.	Yes.	Monitor, record, and report in accordance with Condition 19.4.
AQ0060TVP04 – Condition 35	40 CFR 63.6665 & Table 8, Subpart ZZZZ	NESHAP Subpart A Applicability	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 Subpart ZZZZ.	Yes.	Annual Compliance Audit.

## FORM B2

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

Permit and Condition Number	Applicable Requirement Citation <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – Condition 36	40 CFR 63.6585(c), 63.6590(a)(1)(iii), & 63.6605(a), Subpart ZZZZ	NESHAP Subpart ZZZZ Applicability	Comply with applicable requirements for existing stationary reciprocating internal combustion engines located at an area source of hazardous air pollutant emissions.	Yes.	Monitor, record, and report in accordance with Conditions 37 through 40.
AQ0060TVP04 – Condition 37.1	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. Record and report in accordance with Conditions 39 and 40.
AQ0060TVP04 – Condition 37.2	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.	Annual Compliance Audit. Record and report in accordance with Conditions 39 and 40.
AQ0060TVP04 – Condition 37.3	40 CFR 63.6625(h) & Table 2d, Item 1, 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. Record and report in accordance with Conditions 39 and 40.
AQ0060TVP04 – Condition 38	40 CFR 63.6603(b), 63.6625(i), & Table 2d, Item 1, Footnote 1, Subpart ZZZZ	NESHAP Subpart ZZZZ Work and Management Practices Standards	Change oil and filter every 1,000 hours of operation or annually, whichever comes first; inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and inspect all hoses and belts every 500 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 39 and 40.  <i>Regulation change – please capture the new requirement for oil changes to be within 1 year + 30 days instead of annually.</i>

<sup>1</sup> 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)

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

Non-Applicable Requirements <sup>1</sup>	Reason for non-applicability and citation/basis
40 CFR 60 Subpart IIII	EU IDs 20 and 21 commenced construction, modification, or reconstruction prior to the applicability date of July 11, 2005.
40 CFR 60 Subpart JJJJ	EU IDs 20 and 21 are not spark ignition reciprocating internal combustion engines.

<sup>1</sup> 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)

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Permit Number:     AQ0060TVP04    

1.	Emission Unit ID Number // Operating Scenario	EU ID 22 // Base Scenario
2.	Date installation/construction commenced <sup>1</sup>	1994
3.	Date installed	1994
4.	Emission Unit serial number	Not Available (V-PM-0494)
5.	Special control requirements? [ if yes, describe]	No
6.	Manufacturer and model number	Detroit Diesel
7.	Type of combustion device	Fire Pump Drive Engine
8.	Rated design capacity (horsepower rating for engines)	543 hp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	405 kW

- <sup>1</sup>. 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 27.7 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit:  None.
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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 <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standards	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.
AQ0060TVP04 – Condition 6	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standards	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 6.4.
AQ0060TVP04 – Condition 14	18 AAC 50.055(c)	Sulfur Compound Emission Standards	Do not cause or allow sulfur compound emissions, expressed as SO <sub>2</sub> , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 14.1.
AQ0060TVP04 – Condition 15.2	Permit to Operate No. 9423-AA012 Amendment #1, Condition 9 and Exhibit D	Liquid Fuel Sulfur Content	Comply with the liquid fuel sulfur content limit of 0.5% sulfur.	Yes	Monitor, record, and report in accordance with Conditions 16.2 and 16.3.
AQ0060TVP04 – Condition 19	Permit to Operate No. 9423-AA012 Amendment #1, Conditions 5 through 7	Operating Hour Limits	Do not exceed 120 operating hours during any consecutive 12-month period for the purpose of performing routing maintenance and verifying operational capability.	Yes.	Monitor, record, and report in accordance with Condition 19.4.
AQ0060TVP04 – Condition 35	40 CFR 63.6665 & Table 8, Subpart ZZZZ	NESHAP Subpart A Applicability	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 Subpart ZZZZ.	Yes.	Annual Compliance Audit.

## FORM B2

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

Permit and Condition Number	Applicable Requirement Citation <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – Condition 36	40 CFR 63.6585(c), 63.6590(a)(1)(iii), & 63.6605(a), Subpart ZZZZ	NESHAP Subpart ZZZZ Applicability	Comply with applicable requirements for existing stationary reciprocating internal combustion engines located at an area source of hazardous air pollutant emissions.	Yes.	Monitor, record, and report in accordance with Conditions 37 through 40.
AQ0060TVP04 – Condition 37.1	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. Record and report in accordance with Conditions 39 and 40.
AQ0060TVP04 – Condition 37.2	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.	Annual Compliance Audit. Record and report in accordance with Conditions 39 and 40.
AQ0060TVP04 – Condition 37.3	40 CFR 63.6625(h) & Table 2d, Item 1, 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. Record and report in accordance with Conditions 39 and 40.
AQ0060TVP04 – Condition 38	40 CFR 63.6603(b), 63.6625(i), & Table 2d, Item 1, Footnote 1, Subpart ZZZZ	NESHAP Subpart ZZZZ Work and Management Practices Standards	Change oil and filter every 1,000 hours of operation or annually, whichever comes first; inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and inspect all hoses and belts every 500 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 39 and 40.  <i>Regulation change – please capture the new requirement for oil changes to be within 1 year + 30 days instead of annually.</i>

<sup>1</sup> 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)

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

Non-Applicable Requirements <sup>1</sup>	Reason for non-applicability and citation/basis
40 CFR 60 Subpart IIII	EU ID 22 commenced construction, modification, or reconstruction prior to the applicability date of July 11, 2005.
40 CFR 60 Subpart JJJJ	EU ID 22 is not a spark ignition reciprocating internal combustion engine.

<sup>1</sup> 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)

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Permit Number:     AQ0060TVP04    

1.	Emission Unit ID Number // Operating Scenario	EU ID 23 // Base Scenario
2.	Date installation/construction commenced <sup>1</sup>	1994
3.	Date installed	1994
4.	Emission Unit serial number	Not Available (V-PM-0031)
5.	Special control requirements? [ if yes, describe]	No
6.	Manufacturer and model number	Detroit Diesel
7.	Type of combustion device	Backup Generator Engine
8.	Rated design capacity (horsepower rating for engines)	536 hp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	400 kW

- <sup>1</sup>. 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 27.4 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit:  None.
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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 <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standards	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.
AQ0060TVP04 – Condition 6	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standards	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 6.4.
AQ0060TVP04 – Condition 14	18 AAC 50.055(c)	Sulfur Compound Emission Standards	Do not cause or allow sulfur compound emissions, expressed as SO <sub>2</sub> , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 14.1.
AQ0060TVP04 – Condition 15.2	Permit to Operate No. 9423-AA012 Amendment #1, Condition 9 and Exhibit D	Liquid Fuel Sulfur Content	Comply with the liquid fuel sulfur content limit of 0.5% sulfur.	Yes	Monitor, record, and report in accordance with Conditions 16.2 and 16.3.
AQ0060TVP04 – Condition 19	Permit to Operate 9423-AA012 Amendment #1, Conditions 5 through 7	Operating Hour Limits	Do not exceed 120 operating hours during any consecutive 12-month period for the purpose of performing routing maintenance and verifying operational capability.	Yes.	Monitor, record, and report in accordance with Condition 19.4.
AQ0060TVP04 – Condition 35	40 CFR 63.6665 & Table 8, Subpart ZZZZ	NESHAP Subpart A Applicability	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 Subpart ZZZZ.	Yes.	Annual Compliance Audit.

## FORM B2

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

Permit and Condition Number	Applicable Requirement Citation <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – Condition 36	40 C.F.R. 63.6585(c), 63.6590(a)(1)(iii), & 63.6605(a), Subpart ZZZZ	NESHAP Subpart ZZZZ Applicability	Comply with applicable requirements for existing 18 stationary reciprocating internal combustion engines located at an area source of hazardous air pollutant emissions.	Yes.	Monitor, record, and report in accordance with Conditions 37 through 40.
AQ0060TVP04 – Condition 37.1	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. Record and report in accordance with Conditions 39 and 40.
AQ0060TVP04 – Condition 37.2	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.	Annual Compliance Audit. Record and report in accordance with Conditions 39 and 40.
AQ0060TVP04 – Condition 37.3	40 CFR 63.6625(h) & Table 2d, Item 1, 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. Record and report in accordance with Conditions 39 and 40.
AQ0060TVP04 – Condition 38	40 CFR 63.6603(b), 63.6625(i), & Table 2d, Item 1, Footnote 1, Subpart ZZZZ	NESHAP Subpart ZZZZ Work and Management Practices Standards	Change oil and filter every 1,000 hours of operation or annually, whichever comes first; inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and inspect all hoses and belts every 500 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 39 and 40.  <i>Regulation change – please capture the new requirement for oil changes to be within 1 year + 30 days instead of annually.</i>

<sup>1</sup> 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)

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

Non-Applicable Requirements <sup>1</sup>	Reason for non-applicability and citation/basis
40 CFR 60 Subpart IIII	EU ID 23 commenced construction, modification, or reconstruction prior to the applicability date of July 11, 2005.
40 CFR 60 Subpart JJJJ	EU ID 23 is not a spark ignition reciprocating internal combustion engine.

<sup>1</sup> 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)

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Permit Number:     AQ0060TVP04    

1.	Emission Unit ID Number // Operating Scenario	EU ID 24 // Base Scenario
2.	Date installation/construction commenced <sup>1</sup>	2003
3.	Date installed	2003
4.	Emission Unit serial number	64Z33704 (V-PM-6380)
5.	Special control requirements? [ if yes, describe]	No
6.	Manufacturer and model number	Caterpillar 3306B
7.	Type of combustion device	Air Compressor Driver Engine
8.	Rated design capacity (horsepower rating for engines)	265 bhp
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	N/A
10.	If used for power generation, electrical output (kW)	N/A

- <sup>1</sup> 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 13.5 gal/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit:  None.
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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 <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standards	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.
AQ0060TVP04 – Condition 6	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standards	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 6.3.
AQ0060TVP04 – Condition 14	18 AAC 50.055(c)	Sulfur Compound Emission Standards	Do not cause or allow sulfur compound emissions, expressed as SO <sub>2</sub> , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 14.1.
AQ0060TVP04 – Condition 15.2	Permit to Operate No. 9423-AA012 Amendment #1, Condition 9 and Exhibit D	Liquid Fuel Sulfur Content	Comply with the liquid fuel sulfur content limit of 0.5% sulfur.	Yes	Monitor, record, and report in accordance with Conditions 16.2 and 16.3.
AQ0060TVP04 – Condition 19	AQ0060MSS03, Condition 6	Operating Hour Limits	Do not exceed 1,000 operating hours during any consecutive 12-month period.	Yes.	Monitor, record, and report in accordance with Condition 19.4.
AQ0060TVP04 – Condition 35	40 CFR 63.6665 & Table 8, Subpart ZZZZ	NESHAP Subpart A Applicability	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 Subpart ZZZZ.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 36	40 C.F.R. 63.6585(c), 63.6590(a)(1)(iii), & 63.6605(a), Subpart ZZZZ	NESHAP Subpart ZZZZ Applicability	Comply with applicable requirements for existing stationary reciprocating internal combustion engines located at an area source of hazardous air pollutant emissions.	Yes.	Monitor, record, and report in accordance with Conditions 37 through 40.

## FORM B2

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

Permit and Condition Number	Applicable Requirement Citation <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – Condition 37.1	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. Record and report in accordance with Conditions 39 and 40.
AQ0060TVP04 – Condition 37.2	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.	Annual Compliance Audit. Record and report in accordance with Conditions 39 and 40.
AQ0060TVP04 – Condition 37.3	40 CFR 63.6625(h) & Table 2d, Item 1, 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. Record and report in accordance with Conditions 39 and 40.
AQ0060TVP04 – Condition 38	40 CFR 63.6603(b), 63.6625(i), Table 2d, Item 1, Footnote 1, Subpart ZZZZ	NESHAP Subpart ZZZZ Work and Management Practices Standards	Change oil and filter every 1,000 hours of operation or annually, whichever comes first; inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and inspect all hoses and belts every 500 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 39 and 40.  <i>Regulation change – please capture the new requirement for oil changes to be within 1 year + 30 days instead of annually.</i>

<sup>1</sup> 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)

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

Non-Applicable Requirements <sup>1</sup>	Reason for non-applicability and citation/basis
40 CFR 60 Subpart IIII	EU ID 24 commenced construction, modification, or reconstruction prior to the applicability date of July 11, 2005.
40 CFR 60 Subpart JJJJ	EU ID 24 is not a spark ignition reciprocating internal combustion engine.

<sup>1</sup> 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:     AQ0060TVP04    

1.	Emission Unit ID Number // Operating Scenario	EU ID 25 // Base Scenario
2.	Date installation/construction commenced	1995
3.	Date installed	1995
4.	Emission Unit serial number	Not Available (V-SP-SF/HP/LP)
5.	Special control requirements? [ if yes, describe]	No
6.	Description of process:  Flare (SF/HP/LP) and Pilot	
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)
Fuel Gas	570 MMscf/yr

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 <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standards	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 1.5.
AQ0060TVP04 – Condition 6	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standards	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 6.5.
AQ0060TVP04 – Condition 6	18 AAC 50.055(c)	Sulfur Compound Emission Standards	Do not cause or allow sulfur compound emissions, expressed as SO <sub>2</sub> , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14.3 through 14.6.
AQ0060TVP04 – Condition 15.2	AQ0060MSS03, Condition 5	Fuel Gas H <sub>2</sub> S Limits	Comply with the fuel gas H <sub>2</sub> S content limit of 2,000 ppmv H <sub>2</sub> S.	Yes.	Monitor, record, and report in accordance with Conditions 15.3 and 15.4.
AQ0060TVP04 – Conditions 52	18 AAC 50.326(j)(3), 50.346(b)(5)	Good Air Pollution Control Practice	Perform regular maintenance considering the manufacturer's 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.	Maintain records in accordance with Conditions 52.1 through 52.3.

<sup>1</sup> 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

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

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

<sup>1</sup> 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:     AQ0060TVP04    

1.	Emission Unit ID Number // Operating Scenario	EU ID 26 // Base Scenario
2.	Date installation/construction commenced <sup>1</sup>	2015
3.	Date installed	2015
4.	Emission Unit serial number	0801H
5.	Special control requirements? [ if yes, describe]	No
6.	Manufacturer and model number	Solar Centaur 50
7.	Type of combustion device	Turbine
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)	5,650 kW

<sup>1</sup>. 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 56.4 Mscf/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit:  None.
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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 <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – Condition 1	18 AAC 50.055(a)(1)	Visible Emissions Standards	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.
AQ0060TVP04 – Condition 6	18 AAC 50.055(b)(1)	Particulate Matter Emissions Standards	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 6.1.
AQ0060TVP04 – Condition 14	18 AAC 50.055(c)	Sulfur Compound Emission Standards	Do not cause or allow sulfur compound emissions, expressed as SO <sub>2</sub> , to exceed 500 ppm averaged over three hours.	Yes.	Monitor, record, and report in accordance with Conditions 14.3 through 14.6.
AQ0060TVP04 – Condition 15.1	AQ0060MSS03, Condition 5	Fuel Gas H <sub>2</sub> S Limits	Comply with the fuel gas H <sub>2</sub> S content limit of 1,000 ppmv H <sub>2</sub> S.	Yes.	Monitor, record, and report in accordance with Conditions 15.3 and 15.4.
AQ0060TVP04 – Condition 20	AQ0060MSS03, Condition 7	Requirements to Avoid Classification under PSD	Limit the NO <sub>x</sub> emissions to no more than 27.6 tpy by limiting the operation out of SoLoNO <sub>x</sub> mode to no more than 815 hours per rolling 12-month period.	Yes.	Monitor, record, and report in accordance with Condition 20.1.
AQ0060TVP04 – Condition 23	40 CFR 60.7(b), Subpart A	NSPS Subpart A Startup, Shutdown, & Malfunction Requirements	Maintain records of the occurrence and duration of any start-up, shutdown, or malfunction.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 24 & 25	40 CFR 60.7(c) & (d), Subpart A	NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report & Summary Report	Submit an excess emissions and monitoring systems performance report and/or summary report form to the Administrator semiannually.	Yes.	Report in accordance with Conditions 24.1 through 24.4, 25.1, and 25.2.

## FORM B2

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

Permit and Condition Number	Applicable Requirement Citation <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0060TVP04 – Condition 26	40 CFR 60.8(a), Subpart A	NSPS Subpart A Performance (Source) Tests	Conduct source tests as required and provide a written report.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 27	40 CFR 60.11(d), Subpart A	NSPS Subpart A Good Air Pollution Control Practice	At all times, including periods of startup, shutdown, and malfunction, maintain and operate units in a manner consistent with good air pollution control practice for minimizing emissions.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 28	40 CFR 60.11(g), Subpart A	NSPS Subpart A Credible Evidence	For submitting compliance certifications or establishing a violation, nothing in 40 CFR 60 shall preclude the use of any credible evidence or information relevant to whether units would have been in compliance if the appropriate test or procedure had been performed.	N/A	Advisory Condition.
AQ0060TVP04 – 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.
AQ0060TVP04 – Conditions 30	40 CFR 60.330(a) & (b), Subpart GG	NSPS Subpart GG Applicability	Comply with the applicable requirements for stationary gas turbines.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 31	40 CFR 60.332(a)(2) & (c), Subpart GG	NSPS Subpart GG NO <sub>x</sub> Standard	Do not allow the exhaust gas concentration of NO <sub>x</sub> , on a dry basis at 15 percent oxygen and ISO standard day conditions to exceed 176 ppmv.	Yes.	Monitor, record, and report in accordance with Condition 32.
AQ0060TVP04 – Condition 33	40 CFR 60.333(b), Subpart GG	NSPS Subpart GG SO <sub>2</sub> Standard	Do not burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 wt% <sub>fuel</sub> (8000 ppmw).	Yes.	Monitor, record, and report in accordance with Condition 34.

<sup>1</sup> 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)

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

Non-Applicable Requirements <sup>1</sup>	Reason for non-applicability and citation/basis
40 CFR 60 Subpart KKKK	EU IDs 26 was not constructed, modified, or reconstructed after February 18, 2005.

<sup>1</sup> 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

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

**Table D-1a. Emissions Unit Inventory Summary - Limited Potential Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

EU ID	Emissions Unit Name	Limited Potential Emissions (tpy)						
		NO <sub>x</sub>	CO	PM <sub>10</sub>	VOC	SO <sub>2</sub>	CO <sub>2</sub> e	HAPs <sup>1</sup>
<i>Significant Emissions Units</i>								
5	Solar Saturn T-1200 Turbine	18.1	4.6	0.4	0.1	19.0	6,619.3	0.1
6	Solar Saturn T-1200 Turbine	18.1	4.6	0.4	0.1	19.0	6,619.3	0.1
7	Solar Saturn T-1200 Turbine	18.1	4.6	0.4	0.1	19.0	6,619.3	0.1
9	Solar Saturn T-1200 Turbine	20.2	5.2	0.4	0.1	21.3	7,399.1	0.1
10	Solar Saturn T-1200 Turbine	20.2	5.2	0.4	0.1	21.3	7,399.1	0.1
12	Solar Centaur T-4500 Turbine	66.6	6.4	1.2	0.4	59.4	20,679.5	0.2
13	Solar Centaur T-5900 Turbine	77.5	52.1	1.5	0.5	37.3	25,956.1	0.2
16	Bryan Boiler	3.7	3.1	0.3	0.2	12.5	4,359.5	0.1
17	Bryan Boiler	3.7	3.1	0.3	0.2	12.5	4,359.5	0.1
20	Detroit Diesel 8V71 Engine (NE)	16.3	3.5	1.2	1.3	1.9	601.3	1.4E-02
21	Detroit Diesel 8V71 Engine (SW)	16.3	3.5	1.2	1.3	1.9	601.3	1.4E-02
22	Detroit Diesel Engine	1.0	0.2	0.1	0.1	0.1	37.3	8.8E-04
23	Detroit Diesel Engine	1.0	0.2	0.1	0.1	0.1	36.9	8.7E-04
24	Caterpillar 3306B Engine	4.1	0.9	0.3	0.3	0.5	151.7	3.6E-03
25	Flare (SF/HP/LP) and Pilot	19.4	88.5	7.6	188.4	96.0	33,419.3	0.8
26	Solar Centaur 50 Turbine - In SoLoNOx	27.6	29.0	1.6	0.5	41.6	28,978.0	0.3
	Solar Centaur 50 Turbine - Out of SoLoNOx		8.9					
<b>Significant Unit Total</b>		<b>331.9</b>	<b>223.8</b>	<b>17.1</b>	<b>193.8</b>	<b>363.5</b>	<b>153,836.4</b>	<b>2.0</b>
<i>Insignificant Emissions Units</i>								
N/A	Bryan Boiler	1.8	1.5	0.1	0.1	6.19	2,154.1	3.5E-02
N/A	Burnham PF-510 Boiler #4	1.3	0.7	0.2	4.9E-02	4.5	1,456.9	1.7E-02
N/A	Burnham PF-510 Boiler #5	1.3	0.7	0.2	4.9E-02	4.5	1,456.9	1.7E-02
N/A	Hotsy Portable Pressure Washer Burner	1.3E-04	3.1E-05	1.5E-05	2.1E-06	4.4E-04	0.1	3.2E-07
N/A	Portable Heaters	2.6	0.6	0.3	4.3E-02	9.0	2,866.5	6.5E-03
N/A	Produced Water Storage Tank	N/A	N/A	N/A	0.2	N/A	N/A	1.2E-02
N/A	Motor Room Diesel Day Tank	N/A	N/A	N/A	5.2E-05	N/A	N/A	5.6E-06
N/A	Motor Room Diesel Reserve Tank	N/A	N/A	N/A	5.2E-05	N/A	N/A	5.6E-06
N/A	Emergency Generator Tanks (2 Tanks)	N/A	N/A	N/A	1.0E-04	N/A	N/A	1.1E-05
N/A	MSM Diesel Day Tank	N/A	N/A	N/A	5.2E-05	N/A	N/A	5.6E-06
N/A	Sullair Diesel Tank	N/A	N/A	N/A	5.2E-05	N/A	N/A	5.6E-06
N/A	Crane Diesel Tanks (2 Tanks)	N/A	N/A	N/A	1.0E-04	N/A	N/A	1.1E-05
N/A	Centaur Turbine Oil Tank	N/A	N/A	N/A	0	N/A	N/A	0
N/A	Centaur Lube Oil Tank	N/A	N/A	N/A	0	N/A	N/A	0
N/A	Motor Room Hydraulic Oil Tank	N/A	N/A	N/A	0	N/A	N/A	0
N/A	Compressor Lube Oil Tanks (2 Tanks)	N/A	N/A	N/A	0	N/A	N/A	0
N/A	Paraffin Dispersant Tank	N/A	N/A	N/A	0	N/A	N/A	0
N/A	Demulsifier Tank	N/A	N/A	N/A	0	N/A	N/A	0
<b>Insignificant Unit Total</b>		<b>7.0</b>	<b>3.7</b>	<b>0.8</b>	<b>0.4</b>	<b>24.2</b>	<b>7,934.5</b>	<b>0.1</b>
<b>Total Emissions</b>		<b>338.9</b>	<b>227.4</b>	<b>17.8</b>	<b>194.3</b>	<b>387.7</b>	<b>161,770.9</b>	<b>2.1</b>
Major/Minor		Major	Major	Minor	Major	Major	N/A	N/A
<b>Total Assessable Emissions</b>					<b>1,166.1</b>			

Notes:

<sup>1</sup> Highest individual HAP is Formaldehyde at 1.0 tpy.

**Table D-1b. Emissions Unit Inventory Summary - Unlimited Potential Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

EU ID	Emissions Unit Name	Unlimited Potential Emissions (tpy)						
		NO <sub>x</sub>	CO	PM <sub>10</sub>	VOC	SO <sub>2</sub>	CO <sub>2</sub> e	HAPs
<i>Significant Emissions Units</i>								
5	Solar Saturn T-1200 Turbine	18.1	4.6	0.4	0.1	19.0	6,619.3	0.1
6	Solar Saturn T-1200 Turbine	18.1	4.6	0.4	0.1	19.0	6,619.3	0.1
7	Solar Saturn T-1200 Turbine	18.1	4.6	0.4	0.1	19.0	6,619.3	0.1
9	Solar Saturn T-1200 Turbine	20.2	5.2	0.4	0.1	21.3	7,399.1	0.1
10	Solar Saturn T-1200 Turbine	20.2	5.2	0.4	0.1	21.3	7,399.1	0.1
12	Solar Centaur T-4500 Turbine	66.6	6.4	1.2	0.4	59.4	20,679.5	0.2
13	Solar Centaur T-5900 Turbine	77.5	52.1	1.5	0.5	37.3	25,956.1	0.2
16	Bryan Boiler	3.7	3.1	0.3	0.2	12.5	4,359.5	0.1
17	Bryan Boiler	3.7	3.1	0.3	0.2	12.5	4,359.5	0.1
20	Detroit Diesel 8V71 Engine (NE)	47.5	10.2	3.4	3.8	5.5	1,755.7	4.2E-02
21	Detroit Diesel 8V71 Engine (SW)	47.5	10.2	3.4	3.8	5.5	1,755.7	4.2E-02
22	Detroit Diesel Engine	73.7	15.9	5.2	5.9	8.5	2,724.4	0.1
23	Detroit Diesel Engine	72.8	15.7	5.2	5.8	8.4	2,690.8	0.1
24	Caterpillar 3306B Engine	36.0	7.8	2.6	2.9	4.2	1,329.3	3.1E-02
25	Flare (SF/HP/LP) and Pilot	19.4	88.5	7.6	188.4	96.0	33,419.3	0.8
26	Solar Centaur 50 Turbine - In SoLoNOx	124.0	95.5	1.6	0.5	41.6	28,978.0	0.3
	Solar Centaur 50 Turbine - Out of SoLoNOx							
<b>Significant Unit Total</b>		<b>667.2</b>	<b>332.9</b>	<b>34.0</b>	<b>212.9</b>	<b>391.0</b>	<b>162,663.8</b>	<b>2.2</b>
<i>Insignificant Emissions Units</i>								
N/A	Bryan Boiler	1.8	1.5	0.1	0.1	6.2	2,154.1	3.5E-02
N/A	Burnham PF-510 Boiler #4	1.3	0.7	0.2	4.9E-02	4.5	1,456.9	1.7E-02
N/A	Burnham PF-510 Boiler #5	1.3	0.7	0.2	4.9E-02	4.5	1,456.9	1.7E-02
N/A	Hotsy Portable Pressure Washer Burner	1.3E-04	3.1E-05	1.5E-05	2.1E-06	4.4E-04	0.1	3.2E-07
N/A	Portable Heaters	2.6	0.6	0.3	4.3E-02	9.0	2,866.5	6.5E-03
N/A	Produced Water Storage Tank	N/A	N/A	N/A	0.2	N/A	N/A	1.2E-02
N/A	Motor Room Diesel Day Tank	N/A	N/A	N/A	5.2E-05	N/A	N/A	5.6E-06
N/A	Motor Room Diesel Reserve Tank	N/A	N/A	N/A	5.2E-05	N/A	N/A	5.6E-06
N/A	Emergency Generator Tanks (2 Tanks)	N/A	N/A	N/A	1.0E-04	N/A	N/A	1.1E-05
N/A	MSM Diesel Day Tank	N/A	N/A	N/A	5.2E-05	N/A	N/A	5.6E-06
N/A	Sullair Diesel Tank	N/A	N/A	N/A	5.2E-05	N/A	N/A	5.6E-06
N/A	Crane Diesel Tanks (2 Tanks)	N/A	N/A	N/A	1.0E-04	N/A	N/A	1.1E-05
N/A	Centaur Turbine Oil Tank	N/A	N/A	N/A	0	N/A	N/A	0
N/A	Centaur Lube Oil Tank	N/A	N/A	N/A	0	N/A	N/A	0
N/A	Motor Room Hydraulic Oil Tank	N/A	N/A	N/A	0	N/A	N/A	0
N/A	Compressor Lube Oil Tanks (2 Tanks)	N/A	N/A	N/A	0	N/A	N/A	0
N/A	Paraffin Dispersant Tank	N/A	N/A	N/A	0	N/A	N/A	0
N/A	Demulsifier Tank	N/A	N/A	N/A	0	N/A	N/A	0
<b>Insignificant Unit Total</b>		<b>7.0</b>	<b>3.7</b>	<b>0.8</b>	<b>0.4</b>	<b>24.2</b>	<b>7,934.5</b>	<b>0.1</b>
<b>Total Emissions</b>		<b>674.2</b>	<b>336.5</b>	<b>34.8</b>	<b>213.3</b>	<b>415.3</b>	<b>170,598.3</b>	<b>2.3</b>

**Table D-1c. Emissions Unit Inventory Summary - Estimated Actual Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

EU ID	Emissions Unit Name	Estimated Actual Emissions (tpy)						
		NO <sub>x</sub>	CO	PM <sub>10</sub>	VOC	SO <sub>2</sub>	CO <sub>2</sub> e	HAPs
<i>Significant Emissions Units</i>								
5	Solar Saturn T-1200 Turbine	0	0	0	0	0	0	0
6	Solar Saturn T-1200 Turbine	0	0	0	0	0	0	0
7	Solar Saturn T-1200 Turbine	0	0	0	0	0	0	0
9	Solar Saturn T-1200 Turbine	0.1	3.8E-02	3.0E-03	9.7E-04	0.2	54.1	4.7E-04
10	Solar Saturn T-1200 Turbine	0.2	4.9E-02	3.9E-03	1.2E-03	0.2	69.3	6.1E-04
12	Solar Centaur T-4500 Turbine	65.6	6.3	1.1	0.4	58.5	20,360.8	0.2
13	Solar Centaur T-5900 Turbine	76.9	51.7	1.5	0.5	37.0	25,757.6	0.2
16	Bryan Boiler	1.5	1.2	0.11	0.1	5.0	1,726.4	2.8E-02
17	Bryan Boiler	0.2	0.2	1.5E-02	1.1E-02	0.7	231.9	3.7E-03
20	Detroit Diesel 8V71 Engine (NE)	1.5	0.3	0.1	0.1	0.2	56.7	1.3E-03
21	Detroit Diesel 8V71 Engine (SW)	0.9	0.2	0.1	0.1	0.1	34.9	8.3E-04
22	Detroit Diesel Engine	2.5E-02	5.4E-03	1.8E-03	2.0E-03	2.9E-03	0.9	2.2E-05
23	Detroit Diesel Engine	0.1	1.4E-02	4.7E-03	5.3E-03	7.7E-03	2.5	5.8E-05
24	Caterpillar 3306B Engine	3.7E-02	8.0E-03	2.6E-03	2.9E-03	4.3E-03	1.4	3.2E-05
25	Flare (SF/HP/LP) and Pilot	1.0	4.5	0.4	9.6	4.9	1,711.7	4.3E-02
26	Solar Centaur 50 Turbine - In SoLoNOx	0	0	0	0	0	0	0
	Solar Centaur 50 Turbine - Out of SoLoNOx	0	0	0	0	0	0	
<b>Significant Unit Total</b>		<b>148.1</b>	<b>64.6</b>	<b>3.3</b>	<b>10.8</b>	<b>106.7</b>	<b>50,008.0</b>	<b>0.5</b>
<i>Insignificant Emissions Units</i>								
N/A	Bryan Boiler	1.8	1.5	0.1	0.1	6.2	2,154.1	3.5E-02
N/A	Burnham PF-510 Boiler #4	1.3	0.7	0.2	4.9E-02	4.5	1,456.9	1.7E-02
N/A	Burnham PF-510 Boiler #5	1.3	0.7	0.2	4.9E-02	4.5	1,456.9	1.7E-02
N/A	Hotsy Portable Pressure Washer Burner	1.3E-04	3.1E-05	1.5E-05	2.1E-06	4.4E-04	0.1	3.2E-07
N/A	Portable Heaters	2.6	0.6	0.3	4.3E-02	9.0	2,866.5	6.5E-03
N/A	Produced Water Storage Tank	N/A	N/A	N/A	0.2	N/A	N/A	1.2E-02
N/A	Motor Room Diesel Day Tank	N/A	N/A	N/A	5.2E-05	N/A	N/A	5.6E-06
N/A	Motor Room Diesel Reserve Tank	N/A	N/A	N/A	5.2E-05	N/A	N/A	5.6E-06
N/A	Emergency Generator Tanks (2 Tanks)	N/A	N/A	N/A	1.0E-04	N/A	N/A	1.1E-05
N/A	MSM Diesel Day Tank	N/A	N/A	N/A	5.2E-05	N/A	N/A	5.6E-06
N/A	Sullair Diesel Tank	N/A	N/A	N/A	5.2E-05	N/A	N/A	5.6E-06
N/A	Crane Diesel Tanks (2 Tanks)	N/A	N/A	N/A	1.0E-04	N/A	N/A	1.1E-05
N/A	Centaur Turbine Oil Tank	N/A	N/A	N/A	0	N/A	N/A	0
N/A	Centaur Lube Oil Tank	N/A	N/A	N/A	0	N/A	N/A	0
N/A	Motor Room Hydraulic Oil Tank	N/A	N/A	N/A	0	N/A	N/A	0
N/A	Compressor Lube Oil Tanks (2 Tanks)	N/A	N/A	N/A	0	N/A	N/A	0
N/A	Paraffin Dispersant Tank	N/A	N/A	N/A	0	N/A	N/A	0
N/A	Demulsifier Tank	N/A	N/A	N/A	0	N/A	N/A	0
<b>Insignificant Unit Total</b>		<b>7.0</b>	<b>3.7</b>	<b>0.8</b>	<b>0.4</b>	<b>24.2</b>	<b>7,934.5</b>	<b>0.1</b>
<b>Total Emissions</b>		<b>155.1</b>	<b>68.3</b>	<b>4.1</b>	<b>11.2</b>	<b>131.0</b>	<b>57,942.5</b>	<b>0.6</b>

**Table D-2a. Significant Emissions Unit HAPs Summary - Limited Potential Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

Hazardous Air Pollutant	Limited Potential Emissions (tpy)																Total
	EU ID 5	EU ID 6	EU ID 7	EU ID 9	EU ID 10	EU ID 12	EU ID 13	EU ID 16	EU ID 17	EU ID 20	EU ID 21	EU ID 22	EU ID 23	EU ID 24	EU ID 25	EU ID 26	
1,3 Butadiene	2.4E-05	2.4E-05	2.4E-05	2.7E-05	2.7E-05	7.6E-05	9.5E-05	----	----	1.4E-04	1.4E-04	8.9E-06	8.8E-06	3.6E-05	----	1.1E-04	7.5E-04
Acetaldehyde	2.3E-03	2.3E-03	2.3E-03	2.5E-03	2.5E-03	7.1E-03	8.9E-03	----	----	2.8E-03	2.8E-03	1.7E-04	1.7E-04	7.1E-04	1.2E-02	9.9E-03	0.1
Acrolein	3.6E-04	3.6E-04	3.6E-04	4.0E-04	4.0E-04	1.1E-03	1.4E-03	----	----	3.4E-04	3.4E-04	2.1E-05	2.1E-05	8.6E-05	2.9E-03	1.6E-03	9.7E-03
Benzene	6.8E-04	6.8E-04	6.8E-04	7.6E-04	7.6E-04	2.1E-03	2.7E-03	7.8E-05	7.8E-05	3.4E-03	3.4E-03	2.1E-04	2.1E-04	8.7E-04	4.5E-02	3.0E-03	0.1
Ethyl benzene	1.8E-03	1.8E-03	1.8E-03	2.0E-03	2.0E-03	5.7E-03	7.1E-03	----	----	----	----	----	----	----	0.4	7.9E-03	0.4
Dichlorobenzene	----	----	----	----	----	----	----	4.5E-05	4.5E-05	----	----	----	----	----	----	----	8.9E-05
Formaldehyde	4.0E-02	4.0E-02	4.0E-02	4.5E-02	4.5E-02	0.1	0.2	2.8E-03	2.8E-03	4.3E-03	4.3E-03	2.7E-04	2.7E-04	1.1E-03	0.3	0.2	1.0
n-Hexane	----	----	----	----	----	----	----	0.1	0.1	----	----	----	----	----	8.3E-03	----	0.1
Naphthalene	7.3E-05	7.3E-05	7.3E-05	8.2E-05	8.2E-05	2.3E-04	2.9E-04	2.3E-05	2.3E-05	----	----	----	----	----	----	3.2E-04	1.3E-03
Polycyclic Organic Matter (POM)	1.2E-04	1.2E-04	1.2E-04	1.4E-04	1.4E-04	3.9E-04	4.9E-04	3.3E-06	3.3E-06	6.2E-04	6.2E-04	3.8E-05	3.8E-05	1.6E-04	4.0E-03	5.4E-04	7.5E-03
Propylene Oxide	1.6E-03	1.6E-03	1.6E-03	1.8E-03	1.8E-03	5.1E-03	6.4E-03	----	----	----	----	----	----	----	----	7.2E-03	2.7E-02
Toluene	7.3E-03	7.3E-03	7.3E-03	8.2E-03	8.2E-03	2.3E-02	2.9E-02	1.3E-04	1.3E-04	1.5E-03	1.5E-03	9.3E-05	9.2E-05	3.8E-04	1.7E-02	3.2E-02	0.1
Xylenes (isomers and mixture)	3.6E-03	3.6E-03	3.6E-03	4.0E-03	4.0E-03	1.1E-02	1.4E-02	----	----	1.0E-03	1.0E-03	6.5E-05	6.4E-05	2.6E-04	8.3E-03	1.6E-02	0.1
Arsenic Compounds	----	----	----	----	----	----	----	7.4E-06	7.4E-06	----	----	----	----	----	----	----	1.5E-05
Beryllium Compounds	----	----	----	----	----	----	----	4.5E-07	4.5E-07	----	----	----	----	----	----	----	8.9E-07
Cadmium Compounds	----	----	----	----	----	----	----	4.1E-05	4.1E-05	----	----	----	----	----	----	----	8.2E-05
Chromium Compounds	----	----	----	----	----	----	----	5.2E-05	5.2E-05	----	----	----	----	----	----	----	1.0E-04
Cobalt Compounds	----	----	----	----	----	----	----	3.1E-06	3.1E-06	----	----	----	----	----	----	----	6.2E-06
Lead Compounds	----	----	----	----	----	----	----	1.9E-05	1.9E-05	----	----	----	----	----	----	----	3.7E-05
Manganese Compounds	----	----	----	----	----	----	----	1.4E-05	1.4E-05	----	----	----	----	----	----	----	2.8E-05
Mercury Compounds	----	----	----	----	----	----	----	9.7E-06	9.7E-06	----	----	----	----	----	----	----	1.9E-05
Nickel Compounds	----	----	----	----	----	----	----	7.8E-05	7.8E-05	----	----	----	----	----	----	----	1.6E-04
Selenium Compounds	----	----	----	----	----	----	----	8.9E-07	8.9E-07	----	----	----	----	----	----	----	1.8E-06
<b>Total</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>	<b>0.1</b>	<b>0.1</b>	<b>1.4E-02</b>	<b>1.4E-02</b>	<b>8.8E-04</b>	<b>8.7E-04</b>	<b>3.6E-03</b>	<b>0.8</b>	<b>0.3</b>	<b>2.0</b>

**Table D-2b. Significant Emissions Unit HAPs Summary - Unlimited Potential Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

Hazardous Air Pollutant	Unlimited Potential Emissions (tpy)																Total
	EU ID 5	EU ID 6	EU ID 7	EU ID 9	EU ID 10	EU ID 12	EU ID 13	EU ID 16	EU ID 17	EU ID 20	EU ID 21	EU ID 22	EU ID 23	EU ID 24	EU ID 25	EU ID 26	
1,3 Butadiene	2.4E-05	2.4E-05	2.4E-05	2.7E-05	2.7E-05	7.6E-05	9.5E-05	----	----	4.2E-04	4.2E-04	6.5E-04	6.4E-04	3.2E-04	----	1.1E-04	2.9E-03
Acetaldehyde	2.3E-03	2.3E-03	2.3E-03	2.5E-03	2.5E-03	7.1E-03	8.9E-03	----	----	8.2E-03	8.2E-03	1.3E-02	1.3E-02	6.2E-03	1.2E-02	9.9E-03	0.1
Acrolein	3.6E-04	3.6E-04	3.6E-04	4.0E-04	4.0E-04	1.1E-03	1.4E-03	----	----	9.9E-04	9.9E-04	1.5E-03	1.5E-03	7.5E-04	2.9E-03	1.6E-03	1.5E-02
Benzene	6.8E-04	6.8E-04	6.8E-04	7.6E-04	7.6E-04	2.1E-03	2.7E-03	7.8E-05	7.8E-05	1.0E-02	1.0E-02	1.6E-02	1.5E-02	7.6E-03	4.5E-02	3.0E-03	0.1
Ethyl benzene	1.8E-03	1.8E-03	1.8E-03	2.0E-03	2.0E-03	5.7E-03	7.1E-03	----	----	----	----	----	----	----	0.4	7.9E-03	0.4
Dichlorobenzene	----	----	----	----	----	----	----	4.5E-05	4.5E-05	----	----	----	----	----	----	----	8.9E-05
Formaldehyde	4.0E-02	4.0E-02	4.0E-02	4.5E-02	4.5E-02	0.1	0.2	2.8E-03	2.8E-03	1.3E-02	1.3E-02	2.0E-02	1.9E-02	9.6E-03	0.3	0.2	1.1
n-Hexane	----	----	----	----	----	----	----	0.1	6.7E-02	----	----	----	----	----	8.3E-03	----	0.1
Naphthalene	7.3E-05	7.3E-05	7.3E-05	8.2E-05	8.2E-05	2.3E-04	2.9E-04	2.3E-05	2.3E-05	----	----	----	----	----	----	3.2E-04	1.3E-03
Polycyclic Organic Matter (POM)	1.2E-04	1.2E-04	1.2E-04	1.4E-04	1.4E-04	3.9E-04	4.9E-04	3.3E-06	3.3E-06	1.8E-03	1.8E-03	2.8E-03	2.8E-03	1.4E-03	4.0E-03	5.4E-04	1.7E-02
Propylene Oxide	1.6E-03	1.6E-03	1.6E-03	1.8E-03	1.8E-03	5.1E-03	6.4E-03	----	----	----	----	----	----	----	----	7.2E-03	2.7E-02
Toluene	7.3E-03	7.3E-03	7.3E-03	8.2E-03	8.2E-03	2.3E-02	2.9E-02	1.3E-04	1.3E-04	4.4E-03	4.4E-03	6.8E-03	6.7E-03	3.3E-03	1.7E-02	3.2E-02	0.2
Xylenes (isomers and mixture)	3.6E-03	3.6E-03	3.6E-03	4.0E-03	4.0E-03	1.1E-02	1.4E-02	----	----	3.1E-03	3.1E-03	4.7E-03	4.7E-03	2.3E-03	8.3E-03	1.6E-02	0.1
Arsenic Compounds	----	----	----	----	----	----	----	7.4E-06	7.4E-06	----	----	----	----	----	----	----	1.5E-05
Beryllium Compounds	----	----	----	----	----	----	----	4.5E-07	4.5E-07	----	----	----	----	----	----	----	8.9E-07
Cadmium Compounds	----	----	----	----	----	----	----	4.1E-05	4.1E-05	----	----	----	----	----	----	----	8.2E-05
Chromium Compounds	----	----	----	----	----	----	----	5.2E-05	5.2E-05	----	----	----	----	----	----	----	1.0E-04
Cobalt Compounds	----	----	----	----	----	----	----	3.1E-06	3.1E-06	----	----	----	----	----	----	----	6.2E-06
Lead Compounds	----	----	----	----	----	----	----	1.9E-05	1.9E-05	----	----	----	----	----	----	----	3.7E-05
Manganese Compounds	----	----	----	----	----	----	----	1.4E-05	1.4E-05	----	----	----	----	----	----	----	2.8E-05
Mercury Compounds	----	----	----	----	----	----	----	9.7E-06	9.7E-06	----	----	----	----	----	----	----	1.9E-05
Nickel Compounds	----	----	----	----	----	----	----	7.8E-05	7.8E-05	----	----	----	----	----	----	----	1.6E-04
Selenium Compounds	----	----	----	----	----	----	----	8.9E-07	8.9E-07	----	----	----	----	----	----	----	1.8E-06
<b>Total</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>	<b>0.1</b>	<b>0.1</b>	<b>4.2E-02</b>	<b>4.2E-02</b>	<b>0.1</b>	<b>0.1</b>	<b>3.1E-02</b>	<b>0.8</b>	<b>0.3</b>	<b>2.2</b>

**Table D-2c. Significant Emissions Unit HAPs Summary - Estimated Actual Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

Hazardous Air Pollutant	Estimated Actual Emissions (tpy)																Total
	EU ID 5	EU ID 6	EU ID 7	EU ID 9	EU ID 10	EU ID 12	EU ID 13	EU ID 16	EU ID 17	EU ID 20	EU ID 21	EU ID 22	EU ID 23	EU ID 24	EU ID 25	EU ID 26	
1,3 Butadiene	0	0	0	2.0E-07	2.5E-07	7.5E-05	9.5E-05	----	----	1.4E-05	8.3E-06	2.2E-07	5.9E-07	3.3E-07	----	0	1.9E-04
Acetaldehyde	0	0	0	1.8E-05	2.4E-05	7.0E-03	8.8E-03	----	----	2.7E-04	1.6E-04	4.4E-06	1.2E-05	6.4E-06	6.3E-04	0	1.7E-02
Acrolein	0	0	0	3.0E-06	3.8E-06	1.1E-03	1.4E-03	----	----	3.2E-05	2.0E-05	5.3E-07	1.4E-06	7.7E-07	1.5E-04	0	2.7E-03
Benzene	0	0	0	5.5E-06	7.1E-06	2.1E-03	2.6E-03	3.1E-05	4.2E-06	3.2E-04	2.0E-04	5.3E-06	1.4E-05	7.8E-06	2.3E-03	0	7.6E-03
Ethyl benzene	0	0	0	1.5E-05	1.9E-05	5.6E-03	7.0E-03	----	----	----	----	----	----	----	2.1E-02	0	3.4E-02
Dichlorobenzene	----	----	----	----	----	----	----	1.8E-05	2.4E-06	----	----	----	----	----	----	----	2.0E-05
Formaldehyde	0	0	0	3.3E-04	4.2E-04	0.1	0.2	1.1E-03	1.5E-04	4.1E-04	2.5E-04	6.7E-06	1.8E-05	9.9E-06	1.7E-02	0	0.2
n-Hexane	----	----	----	----	----	----	----	2.7E-02	3.6E-03	----	----	----	----	----	4.2E-04	----	3.0E-02
Naphthalene	0	0	0	6.0E-07	7.7E-07	2.3E-04	2.9E-04	9.0E-06	1.2E-06	----	----	----	----	----	----	0	5.2E-04
Polycyclic Organic Matter (POM)	0	0	0	1.0E-06	1.3E-06	3.8E-04	4.8E-04	1.3E-06	1.7E-07	5.8E-05	3.6E-05	9.6E-07	2.5E-06	1.4E-06	2.0E-04	0	1.2E-03
Propylene Oxide	0	0	0	1.3E-05	1.7E-05	5.0E-03	6.4E-03	----	----	----	----	----	----	----	----	0	1.1E-02
Toluene	0	0	0	6.0E-05	7.7E-05	2.3E-02	2.9E-02	5.0E-05	6.7E-06	1.4E-04	8.7E-05	2.3E-06	6.1E-06	3.4E-06	8.5E-04	0	0.1
Xylenes (isomers and mixture)	0	0	0	3.0E-05	3.8E-05	1.1E-02	1.4E-02	----	----	9.9E-05	6.1E-05	1.6E-06	4.3E-06	2.4E-06	4.2E-04	0	2.6E-02
Arsenic Compounds	----	----	----	----	----	----	----	2.9E-06	4.0E-07	----	----	----	----	----	----	----	3.3E-06
Beryllium Compounds	----	----	----	----	----	----	----	1.8E-07	2.4E-08	----	----	----	----	----	----	----	2.0E-07
Cadmium Compounds	----	----	----	----	----	----	----	1.6E-05	2.2E-06	----	----	----	----	----	----	----	1.8E-05
Chromium Compounds	----	----	----	----	----	----	----	2.1E-05	2.8E-06	----	----	----	----	----	----	----	2.3E-05
Cobalt Compounds	----	----	----	----	----	----	----	1.2E-06	1.7E-07	----	----	----	----	----	----	----	1.4E-06
Lead Compounds	----	----	----	----	----	----	----	7.4E-06	9.9E-07	----	----	----	----	----	----	----	8.4E-06
Manganese Compounds	----	----	----	----	----	----	----	5.6E-06	7.5E-07	----	----	----	----	----	----	----	6.3E-06
Mercury Compounds	----	----	----	----	----	----	----	3.8E-06	5.1E-07	----	----	----	----	----	----	----	4.3E-06
Nickel Compounds	----	----	----	----	----	----	----	3.1E-05	4.2E-06	----	----	----	----	----	----	----	3.5E-05
Selenium Compounds	----	----	----	----	----	----	----	3.5E-07	4.7E-08	----	----	----	----	----	----	----	4.0E-07
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4.7E-04</b>	<b>6.1E-04</b>	<b>0.2</b>	<b>0.2</b>	<b>2.8E-02</b>	<b>3.7E-03</b>	<b>1.3E-03</b>	<b>8.3E-04</b>	<b>2.2E-05</b>	<b>5.8E-05</b>	<b>3.2E-05</b>	<b>4.3E-02</b>	<b>0</b>	<b>0.3</b>

**Table D-2d. Insignificant Emissions Unit HAPs Summary - Unlimited Potential Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

Hazardous Air Pollutant	Unlimited Potential Emissions (tpy)						Total
	Bryan Boiler	Burnham Boiler <sup>1</sup>	Burnham Boiler <sup>1</sup>	Pressure Washer	Portable Heaters	Tanks	
1,1,1-Trichloroethane	----	----	----	1.5E-09	3.0E-05	----	3.0E-05
Benzene	3.9E-05	1.9E-05	1.9E-05	1.3E-09	2.7E-05	2.6E-03	2.7E-03
Cumene	----	----	----	----	----	1.8E-05	1.8E-05
Ethyl benzene	----	----	----	4.0E-10	8.1E-06	1.1E-04	1.2E-04
Dichlorobenzene	2.2E-05	1.1E-05	1.1E-05	----	----	----	4.3E-05
Formaldehyde	1.4E-03	6.7E-04	6.7E-04	2.1E-07	4.2E-03	----	6.9E-03
n-Hexane	3.3E-02	1.6E-02	1.6E-02	----	----	6.8E-03	0.1
Naphthalene	1.1E-05	5.4E-06	5.4E-06	7.1E-09	1.4E-04	----	1.7E-04
Polycyclic Organic Matter (POM)	1.6E-06	7.8E-07	7.8E-07	2.1E-08	4.2E-04	----	4.3E-04
Toluene	6.2E-05	3.0E-05	3.0E-05	3.9E-08	7.9E-04	2.3E-03	3.2E-03
Xylenes (isomers and mixture)	----	----	----	6.9E-10	1.4E-05	7.3E-05	8.7E-05
Arsenic Compounds	3.7E-06	1.8E-06	1.8E-06	3.5E-09	7.0E-05	----	7.7E-05
Beryllium Compounds	2.2E-07	1.1E-07	1.1E-07	2.6E-09	5.3E-05	----	5.3E-05
Cadmium Compounds	2.0E-05	9.8E-06	9.8E-06	2.6E-09	5.3E-05	----	9.2E-05
Chromium Compounds	2.6E-05	1.2E-05	1.2E-05	2.6E-09	5.3E-05	----	1.0E-04
Cobalt Compounds	1.5E-06	7.5E-07	7.5E-07	----	----	----	3.0E-06
Lead Compounds	9.2E-06	4.4E-06	4.4E-06	7.8E-09	1.6E-04	----	1.8E-04
Manganese Compounds	7.0E-06	3.4E-06	3.4E-06	5.2E-09	1.1E-04	----	1.2E-04
Mercury Compounds	4.8E-06	2.3E-06	2.3E-06	2.6E-09	5.3E-05	----	6.2E-05
Nickel Compounds	3.9E-05	1.9E-05	1.9E-05	2.6E-09	5.3E-05	----	1.3E-04
Selenium Compounds	4.4E-07	2.1E-07	2.1E-07	1.3E-08	2.6E-04	----	2.6E-04
<b>Total</b>	<b>3.5E-02</b>	<b>1.7E-02</b>	<b>1.7E-02</b>	<b>3.2E-07</b>	<b>6.5E-03</b>	<b>1.2E-02</b>	<b>0.1</b>

**Notes:**

<sup>1</sup> Dual fuel-fired Burnham boiler emissions are based on fuel gas firing which has greater emissions than diesel firing.

**Tale D-3a. Significant Emission Unit Inventory  
Hilcorp Alaska, LLC - Dolly Varden Platform**

EU ID	Emission Unit Name	Emission Unit Description	Fuel	Rating/Size	Limited Potential Operation <sup>1</sup>	Unlimited Potential Operation <sup>2</sup>	Estimated Actual Operation <sup>3</sup>
5	Solar Saturn T-1200 Turbine	Solar Pump Drive #5	Fuel Gas	1,200 hp	8,760 hr/yr	8,760 hr/yr	0 hr/yr
6	Solar Saturn T-1200 Turbine	Solar Pump Drive #6	Fuel Gas	1,200 hp	8,760 hr/yr	8,760 hr/yr	0 hr/yr
7	Solar Saturn T-1200 Turbine	Solar Pump Drive #7	Fuel Gas	1,200 hp	8,760 hr/yr	8,760 hr/yr	0 hr/yr
9	Solar Saturn T-1200 Turbine	AC #2 Generator Drive	Fuel Gas	1,200 hp	8,760 hr/yr	8,760 hr/yr	64 hr/yr
10	Solar Saturn T-1200 Turbine	AC #3 Generator Drive	Fuel Gas	1,200 hp	8,760 hr/yr	8,760 hr/yr	82 hr/yr
12	Solar Centaur T-4500 Turbine	Compressor Drive	Fuel Gas	4,500 hp	8,760 hr/yr	8,760 hr/yr	8,625 hr/yr
13	Solar Centaur T-5900 Turbine	AC #6 ESP Generator	Fuel Gas	4,270 kW	8,760 hr/yr	8,760 hr/yr	8,693 hr/yr
16	Bryan Boiler	Glycol Boiler #1	Fuel Gas	8.5 MMBtu/hr	8,760 hr/yr	8,760 hr/yr	3,469 hr/yr
17	Bryan Boiler	Glycol Boiler #2	Fuel Gas	8.5 MMBtu/hr	8,760 hr/yr	8,760 hr/yr	466 hr/yr
20	Detroit Diesel 8V71 Engine (NE)	East Skagit Crane	Diesel	350 hp	3,000 hr/yr <sup>4</sup>	8,760 hr/yr	283 hr/yr
21	Detroit Diesel 8V71 Engine (SW)	West Skagit Crane	Diesel	350 hp	3,000 hr/yr <sup>4</sup>	8,760 hr/yr	174 hr/yr
22	Detroit Diesel Engine	Fire Pump Drive P-3	Diesel	405 kW	120 hr/yr <sup>5</sup>	8,760 hr/yr	3 hr/yr
23	Detroit Diesel Engine	Detroit Backup Generator	Diesel	400 kW	120 hr/yr <sup>5</sup>	8,760 hr/yr	8 hr/yr
24	Caterpillar 3306B Engine	Air Compressor Driver	Diesel	265 bhp	1,000 hr/yr <sup>6</sup>	8,760 hr/yr	9 hr/yr
25	Flare (SF/HP/LP) and Pilot	Safety/Operating Flares	Fuel Gas	570 MMscf/yr	570 MMscf/yr	570 MMscf/yr	29.2 MMscf/yr
26	Solar Centaur 50 Turbine - In SoLoNOx	AC #7 SoLoNOx Turbine	Fuel Gas	5.65 MW	7,945 hr/yr	0 hr/yr	0 hr/yr
	Solar Centaur 50 Turbine - Out of SoLoNOx				815 hr/yr <sup>7</sup>	8,760 hr/yr <sup>8</sup>	0 hr/yr

**Table D-3b. Insignificant Emission Unit Inventory  
Hilcorp Alaska, LLC - Dolly Varden Platform**

EU ID	Emission Unit Name	Emission Unit Description	Fuel	Rating/Size	Unlimited Potential Operation <sup>2</sup>
N/A	Bryan Boiler	Steam Boiler #3	Fuel Gas	4.2 MMBtu/hr	8,760 hr/yr
N/A	Burnham PF-510 Boiler #4	MSM Glycol Boiler #4	Fuel Gas	2.033 MMBtu/hr	8,760 hr/yr
			Diesel		
N/A	Burnham PF-510 Boiler #5	MSM Glycol Boiler #5	Fuel Gas	2.033 MMBtu/hr	8,760 hr/yr
			Diesel		
N/A	Hotsy Portable Pressure Washer Burner	Portable Pressure Washer	Diesel	197 Btu/hr	8,760 hr/yr
N/A	Portable Heaters	Portable Heaters (Each less than 1.7 MMBtu/hr)	Diesel	4 MMBtu/hr, total	8,760 hr/yr
N/A	Produced Water Storage Tank	North Subdeck Produced Water Storage Tank	Produced Water	24,900 Gallons	8,760 hr/yr
N/A	Motor Room Diesel Day Tank	Diesel Storage Tank	Diesel	860 Gallons	8,760 hr/yr
N/A	Motor Room Diesel Reserve Tank	Diesel Storage Tank	Diesel	187 Gallons	8,760 hr/yr
N/A	Emergency Generator Tanks (2 Tanks)	Diesel Storage Tanks	Diesel	273 Gallons, each	8,760 hr/yr
N/A	MSM Diesel Day Tank	Diesel Storage Tank	Diesel	215 Gallons	8,760 hr/yr
N/A	Sullair Diesel Tank	Diesel Storage Tank	Diesel	100 Gallons	8,760 hr/yr
N/A	Crane Diesel Tanks (2 Tanks)	Diesel Storage Tanks	Diesel	140 Gallons, each	8,760 hr/yr
N/A	Centaur Turbine Oil Tank	Lube Oil Storage Tank	Lube Oil	249 Gallons	8,760 hr/yr
N/A	Centaur Lube Oil Tank	Lube Oil Storage Tank	Lube Oil	330 Gallons	8,760 hr/yr
N/A	Motor Room Hydraulic Oil Tank	Lube Oil Storage Tank	Lube Oil	399 Gallons	8,760 hr/yr
N/A	Compressor Lube Oil Tanks (2 Tanks)	Lube Oil Storage Tanks	Lube Oil	85 Gallons, each	8,760 hr/yr
N/A	Paraffin Dispersant Tank	Paraffin Dispersant Storage Tank	Paraffin Dispersant	750 Gallons	8,760 hr/yr
N/A	Demulsifier Tank	Demulsifier Storage Tank	Demulsifier	550 Gallons	8,760 hr/yr

**Notes:**

<sup>1</sup> Allowable operation is based on full-time operation, or permit operating limits, where applicable. This value is used to calculate limited potential emissions.

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

<sup>3</sup> Estimated actual operation based on calendar year 2023 actual hours of operation or actual fuel consumption.

<sup>4</sup> EU IDs 20 and 21 are limited to 3,000 hours of operation per consecutive 12-month period, each, per Condition 19.1 of Permit No. AQ0060TVP04.

<sup>5</sup> EU IDs 22 and 23 are limited to 120 hours of operation per consecutive 12-month period, each, for performing routine maintenance and verifying operational capability per Condition 19.2 of Permit No. AQ0060TVP04.

<sup>6</sup> EU ID 24 is limited to 1,000 hours of operation per rolling 12-month period per Condition 6 of Permit No AQ0060MSS03.

<sup>7</sup> EU ID 26 is limited to 815 hours per rolling 12-month period in out of SoLoNO<sub>x</sub> mode per Condition 7.2 of Permit No. AQ0060MSS03.

<sup>8</sup> For EU ID 26, unlimited potential emissions are calculated as full-time operation out-of-SoLoNO<sub>x</sub>.

**Table D-4a. Significant Emission Unit Inventory - NO<sub>x</sub> Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Limited Potential Emissions	Unlimited Potential Emissions	Estimated Actual Emissions
5	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-1	0.32 lb/MMBtu	18.1 tpy	18.1 tpy	0 tpy
6	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-1	0.32 lb/MMBtu	18.1 tpy	18.1 tpy	0 tpy
7	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-1	0.32 lb/MMBtu	18.1 tpy	18.1 tpy	0 tpy
9	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-1	0.32 lb/MMBtu	20.2 tpy	20.2 tpy	0 tpy
10	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-1	0.32 lb/MMBtu	20.2 tpy	20.2 tpy	0 tpy
12	Solar Centaur T-4500 Turbine	Fuel Gas	4,500 hp	2010 Source Test/MSS03 TAR	15.2 lb/hr	66.6 tpy	66.6 tpy	65.6 tpy
13	Solar Centaur T-5900 Turbine	Fuel Gas	4,270 kW	2012 Source Test/MSS03 TAR	17.7 lb/hr	77.5 tpy	77.5 tpy	76.9 tpy
16	Bryan Boiler	Fuel Gas	8.5 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	3.7 tpy	3.7 tpy	1.5 tpy
17	Bryan Boiler	Fuel Gas	8.5 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	3.7 tpy	3.7 tpy	0.2 tpy
20	Detroit Diesel 8V71 Engine (NE)	Diesel	350 hp	AP-42 Table 3.3-1	0.031 lb/hp-hr	16.3 tpy	47.5 tpy	1.5 tpy
21	Detroit Diesel 8V71 Engine (SW)	Diesel	350 hp	AP-42 Table 3.3-1	0.031 lb/hp-hr	16.3 tpy	47.5 tpy	0.9 tpy
22	Detroit Diesel Engine	Diesel	405 kW	AP-42 Table 3.3-1	0.031 lb/hp-hr	1.0 tpy	73.7 tpy	2.5E-02 tpy
23	Detroit Diesel Engine	Diesel	400 kW	AP-42 Table 3.3-1	0.031 lb/hp-hr	1.0 tpy	72.8 tpy	0.1 tpy
24	Caterpillar 3306B Engine	Diesel	265 bhp	AP-42 Table 3.3-1	0.031 lb/hp-hr	4.1 tpy	36.0 tpy	3.7E-02 tpy
25	Flare (SF/HP/LP) and Pilot	Fuel Gas	570 MMscf/yr	AP-42 Table 13.5-1	0.068 lb/MMBtu	19.4 tpy	19.4 tpy	1.0 tpy
26	Solar Centaur 50 Turbine - In SoLoNOx	Fuel Gas	5.65 MW	2016 Source Test/MSS03 TAR	4.04 lb/hr	27.6 tpy <sup>1</sup>	0 tpy	0 tpy
	Vendor Data			28.3 lb/hr	124.0 tpy		0 tpy	
<b>Total</b>						<b>331.9 tpy</b>	<b>667.2 tpy</b>	<b>148.1 tpy</b>

**Table D-4b. Insignificant Emission Unit Inventory - NO<sub>x</sub> Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Unlimited Potential Emissions
N/A	Bryan Boiler	Fuel Gas	4.2 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	1.8 tpy
N/A	Burnham PF-510 Boiler #4	Fuel Gas	2.033 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	1.3 tpy <sup>2</sup>
		Diesel		AP-42 Table 1.3-1	20 lb/kgal	
N/A	Burnham PF-510 Boiler #5	Fuel Gas	2.033 MMBtu/hr	AP-42 Table 1.4-1	100 lb/MMscf	1.3 tpy <sup>2</sup>
		Diesel		AP-42 Table 1.3-1	20 lb/kgal	
N/A	Hotsy Portable Pressure Washer Burner	Diesel	197 Btu/hr	AP-42 Table 1.3-1	20 lb/kgal	1.3E-04 tpy
N/A	Portable Heaters	Diesel	4 MMBtu/hr, total	AP-42 Table 1.3-1	20 lb/kgal	2.6 tpy
N/A	Produced Water Storage Tank	Produced Water	24,900 Gallons	N/A	N/A	N/A
N/A	Motor Room Diesel Day Tank	Diesel	860 Gallons	N/A	N/A	N/A
N/A	Motor Room Diesel Reserve Tank	Diesel	187 Gallons	N/A	N/A	N/A
N/A	Emergency Generator Tanks (2 Tanks)	Diesel	273 Gallons, each	N/A	N/A	N/A
N/A	MSM Diesel Day Tank	Diesel	215 Gallons	N/A	N/A	N/A
N/A	Sullair Diesel Tank	Diesel	100 Gallons	N/A	N/A	N/A
N/A	Crane Diesel Tanks (2 Tanks)	Diesel	140 Gallons, each	N/A	N/A	N/A
N/A	Centaur Turbine Oil Tank	Lube Oil	249 Gallons	N/A	N/A	N/A
N/A	Centaur Lube Oil Tank	Lube Oil	330 Gallons	N/A	N/A	N/A
N/A	Motor Room Hydraulic Oil Tank	Lube Oil	399 Gallons	N/A	N/A	N/A
N/A	Compressor Lube Oil Tanks (2 Tanks)	Lube Oil	85 Gallons, each	N/A	N/A	N/A
N/A	Paraffin Dispersant Tank	Paraffin Dispersant	750 Gallons	N/A	N/A	N/A
N/A	Demulsifier Tank	Demulsifier	550 Gallons	N/A	N/A	N/A
<b>Total</b>						<b>7.0 tpy</b>

**Notes:**

<sup>1</sup> EU ID 26 is limited to 27.6 tpy of NO<sub>x</sub> per Condition 7 of Permit No. AQ0060MSS03.

<sup>2</sup> Dual fuel-fired Burnham boiler emissions are based on diesel fuel firing which has greater emissions than fuel gas firing.

**Conversions:**

Fuel Gas Heat Content:	1,001 Btu/scf	Diesel Engine Heat Rate:	7,000 Btu/hp-hr	EU ID 12 Heat Rate:	8,960 Btu/hp-hr
Diesel Fuel Heat Content:	137,000 Btu/gal	EU IDs 5-7 Heat Rate:	10,755 Btu/hp-hr	EU ID 13 Heat Rate:	11,852 Btu/kW-hr
Diesel Fuel Density:	7 lb/gal	EU IDs 9 and 10 Heat Rate:	12,022 Btu/hp-hr	EU ID 26 Heat Rate:	10,000 Btu/kW-hr

**Table D-5a. Significant Emission Unit Inventory - CO Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Limited Potential Emissions	Unlimited Potential Emissions	Estimated Actual Emissions
5	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-1	0.082 lb/MMBtu	4.6 tpy	4.6 tpy	0 tpy
6	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-1	0.082 lb/MMBtu	4.6 tpy	4.6 tpy	0 tpy
7	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-1	0.082 lb/MMBtu	4.6 tpy	4.6 tpy	0 tpy
9	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-1	0.082 lb/MMBtu	5.2 tpy	5.2 tpy	3.8E-02 tpy
10	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-1	0.082 lb/MMBtu	5.2 tpy	5.2 tpy	4.9E-02 tpy
12	Solar Centaur T-4500 Turbine	Fuel Gas	4,500 hp	2010 Source Test/MSS03 TAR	1.47 lb/hr	6.4 tpy	6.4 tpy	6.3 tpy
13	Solar Centaur T-5900 Turbine	Fuel Gas	4,270 kW	2012 Source Test/MSS03 TAR	11.9 lb/hr	52.1 tpy	52.1 tpy	51.7 tpy
16	Bryan Boiler	Fuel Gas	8.5 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	3.1 tpy	3.1 tpy	1.2 tpy
17	Bryan Boiler	Fuel Gas	8.5 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	3.1 tpy	3.1 tpy	0.2 tpy
20	Detroit Diesel 8V71 Engine (NE)	Diesel	350 hp	AP-42 Table 3.3-1	0.00668 lb/hp-hr	3.5 tpy	10.2 tpy	0.3 tpy
21	Detroit Diesel 8V71 Engine (SW)	Diesel	350 hp	AP-42 Table 3.3-1	0.00668 lb/hp-hr	3.5 tpy	10.2 tpy	0.2 tpy
22	Detroit Diesel Engine	Diesel	405 kW	AP-42 Table 3.3-1	0.00668 lb/hp-hr	0.2 tpy	15.9 tpy	5.4E-03 tpy
23	Detroit Diesel Engine	Diesel	400 kW	AP-42 Table 3.3-1	0.00668 lb/hp-hr	0.2 tpy	15.7 tpy	1.4E-02 tpy
24	Caterpillar 3306B Engine	Diesel	265 bhp	AP-42 Table 3.3-1	0.00668 lb/hp-hr	0.9 tpy	7.8 tpy	8.0E-03 tpy
25	Flare (SF/HP/LP) and Pilot	Fuel Gas	570 MMscf/yr	AP-42 Table 13.5-2	0.31 lb/MMBtu	88.5 tpy	88.5 tpy	4.5 tpy
26	Solar Centaur 50 Turbine - In SoLoNOx	Fuel Gas	5.65 MW	Source Test/MSS03 TAR	7.3 lb/hr	29.0 tpy	0 tpy	0 tpy
	Vendor Data			21.8 lb/hr	8.9 tpy	95.5 tpy	0 tpy	
<b>Total</b>						<b>223.8 tpy</b>	<b>332.9 tpy</b>	<b>64.6 tpy</b>

**Table D-5b. Insignificant Emission Unit Inventory - CO Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Unlimited Potential Emissions
N/A	Bryan Boiler	Fuel Gas	4.2 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	1.5 tpy
N/A	Burnham PF-510 Boiler #4	Fuel Gas	2.033 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	0.7 tpy <sup>1</sup>
		Diesel		AP-42 Table 1.3-1	5 lb/kgal	
N/A	Burnham PF-510 Boiler #5	Fuel Gas	2.033 MMBtu/hr	AP-42 Table 1.4-1	84 lb/MMscf	0.7 tpy <sup>1</sup>
		Diesel		AP-42 Table 1.3-1	5 lb/kgal	
N/A	Hotsy Portable Pressure Washer Burner	Diesel	197 Btu/hr	AP-42 Table 1.3-1	5 lb/kgal	3.1E-05 tpy
N/A	Portable Heaters	Diesel	4 MMBtu/hr, total	AP-42 Table 1.3-1	5 lb/kgal	0.6 tpy
N/A	Produced Water Storage Tank	Produced Water	24,900 Gallons	N/A	N/A	N/A
N/A	Motor Room Diesel Day Tank	Diesel	860 Gallons	N/A	N/A	N/A
N/A	Motor Room Diesel Reserve Tank	Diesel	187 Gallons	N/A	N/A	N/A
N/A	Emergency Generator Tanks (2 Tanks)	Diesel	273 Gallons, each	N/A	N/A	N/A
N/A	MSM Diesel Day Tank	Diesel	215 Gallons	N/A	N/A	N/A
N/A	Sullair Diesel Tank	Diesel	100 Gallons	N/A	N/A	N/A
N/A	Crane Diesel Tanks (2 Tanks)	Diesel	140 Gallons, each	N/A	N/A	N/A
N/A	Centaur Turbine Oil Tank	Lube Oil	249 Gallons	N/A	N/A	N/A
N/A	Centaur Lube Oil Tank	Lube Oil	330 Gallons	N/A	N/A	N/A
N/A	Motor Room Hydraulic Oil Tank	Lube Oil	399 Gallons	N/A	N/A	N/A
N/A	Compressor Lube Oil Tanks (2 Tanks)	Lube Oil	85 Gallons, each	N/A	N/A	N/A
N/A	Paraffin Dispersant Tank	Paraffin Dispersant	750 Gallons	N/A	N/A	N/A
N/A	Demulsifier Tank	Demulsifier	550 Gallons	N/A	N/A	N/A
<b>Total</b>						<b>3.7 tpy</b>

**Notes:**

<sup>1</sup> Dual fuel fired Burnham boiler emissions are based on fuel gas firing which has greater emissions than diesel firing.

**Conversions:**

Fuel Gas Heat Content:	1,001 Btu/scf	Diesel Engine Heat Rate:	7,000 Btu/hp-hr	EU ID 12 Heat Rate:	8,960 Btu/hp-hr
Diesel Fuel Heat Content:	137,000 Btu/gal	EU IDs 5-7 Heat Rate:	10,755 Btu/hp-hr	EU ID 13 Heat Rate:	11,852 Btu/kW-hr
Diesel Fuel Density:	7 lb/gal	EU IDs 9 and 10 Heat Rate:	12,022 Btu/hp-hr	EU ID 26 Heat Rate:	10,000 Btu/kW-hr

**Table D-6a. Significant Emission Unit Inventory - PM<sub>10</sub> Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Limited Potential Emissions	Unlimited Potential Emissions	Estimated Actual Emissions
5	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	0.4 tpy	0.4 tpy	0 tpy
6	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	0.4 tpy	0.4 tpy	0 tpy
7	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	0.4 tpy	0.4 tpy	0 tpy
9	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	0.4 tpy	0.4 tpy	3.0E-03 tpy
10	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	0.4 tpy	0.4 tpy	3.9E-03 tpy
12	Solar Centaur T-4500 Turbine	Fuel Gas	4,500 hp	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	1.2 tpy	1.2 tpy	1.1 tpy
13	Solar Centaur T-5900 Turbine	Fuel Gas	4,270 kW	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	1.5 tpy	1.5 tpy	1.5 tpy
16	Bryan Boiler	Fuel Gas	8.5 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	0.3 tpy	0.3 tpy	0.1 tpy
17	Bryan Boiler	Fuel Gas	8.5 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	0.3 tpy	0.3 tpy	1.5E-02 tpy
20	Detroit Diesel 8V71 Engine (NE)	Diesel	350 hp	AP-42 Table 3.3-1	0.0022 lb/hp-hr	1.2 tpy	3.4 tpy	0.1 tpy
21	Detroit Diesel 8V71 Engine (SW)	Diesel	350 hp	AP-42 Table 3.3-1	0.0022 lb/hp-hr	1.2 tpy	3.4 tpy	0.1 tpy
22	Detroit Diesel Engine	Diesel	405 kW	AP-42 Table 3.3-1	0.0022 lb/hp-hr	0.07 tpy	5.2 tpy	1.8E-03 tpy
23	Detroit Diesel Engine	Diesel	400 kW	AP-42 Table 3.3-1	0.0022 lb/hp-hr	0.07 tpy	5.2 tpy	4.7E-03 tpy
24	Caterpillar 3306B Engine	Diesel	265 bhp	AP-42 Table 3.3-1	0.0022 lb/hp-hr	0.3 tpy	2.6 tpy	2.6E-03 tpy
25	Flare (SF/HP/LP) and Pilot	Fuel Gas	570 MMscf/yr	AP-42 Table 13.5-1	0.0265 lb/MMBtu	7.6 tpy	7.6 tpy	0.4 tpy
26	Solar Centaur 50 Turbine - In SoLoNOx	Fuel Gas	5.65 MW	AP-42 Table 3.1-2a	0.0066 lb/MMBtu	1.6 tpy	1.6 tpy	0 tpy
	Solar Centaur 50 Turbine - Out of SoLoNOx							
<b>Total</b>						<b>17.1 tpy</b>	<b>34.0 tpy</b>	<b>3.3 tpy</b>

**Table D-6b. Insignificant Emission Unit Inventory - PM<sub>10</sub> Emissions  
Table D-3b. Insignificant Emission Unit Inventory**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Unlimited Potential Emissions
N/A	Bryan Boiler	Fuel Gas	4.2 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	0.1 tpy
N/A	Burnham PF-510 Boiler #4	Fuel Gas	2.033 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	0.2 tpy <sup>1</sup>
		Diesel		AP-42 Table 1.3-2 & 7	2.38 lb/kgal	
N/A	Burnham PF-510 Boiler #5	Fuel Gas	2.033 MMBtu/hr	AP-42 Table 1.4-2	7.6 lb/MMscf	0.2 tpy <sup>1</sup>
		Diesel		AP-42 Table 1.3-2 & 7	2.38 lb/kgal	
N/A	Hotsy Portable Pressure Washer Burner	Diesel	197 Btu/hr	AP-42 Table 1.3-2 & 7	2.38 lb/kgal	1.5E-05 tpy
N/A	Portable Heaters	Diesel	4 MMBtu/hr, total	AP-42 Table 1.3-2 & 7	2.38 lb/kgal	0.3 tpy
N/A	Produced Water Storage Tank	Produced Water	24,900 Gallons	N/A	N/A	N/A
N/A	Motor Room Diesel Day Tank	Diesel	860 Gallons	N/A	N/A	N/A
N/A	Motor Room Diesel Reserve Tank	Diesel	187 Gallons	N/A	N/A	N/A
N/A	Emergency Generator Tanks (2 Tanks)	Diesel	273 Gallons, each	N/A	N/A	N/A
N/A	MSM Diesel Day Tank	Diesel	215 Gallons	N/A	N/A	N/A
N/A	Sullair Diesel Tank	Diesel	100 Gallons	N/A	N/A	N/A
N/A	Crane Diesel Tanks (2 Tanks)	Diesel	140 Gallons, each	N/A	N/A	N/A
N/A	Centaur Turbine Oil Tank	Lube Oil	249 Gallons	N/A	N/A	N/A
N/A	Centaur Lube Oil Tank	Lube Oil	330 Gallons	N/A	N/A	N/A
N/A	Motor Room Hydraulic Oil Tank	Lube Oil	399 Gallons	N/A	N/A	N/A
N/A	Compressor Lube Oil Tanks (2 Tanks)	Lube Oil	85 Gallons, each	N/A	N/A	N/A
N/A	Paraffin Dispersant Tank	Paraffin Dispersant	750 Gallons	N/A	N/A	N/A
N/A	Demulsifier Tank	Demulsifier	550 Gallons	N/A	N/A	N/A
<b>Total</b>						<b>0.8 tpy</b>

**Notes:**

<sup>1</sup> Dual fuel fired Burnham boiler emissions are based on diesel firing which has greater emissions than fuel gas firing.

**Conversions:**

Fuel Gas Heat Content:	1,001 Btu/scf	Diesel Engine Heat Rate:	7,000 Btu/hp-hr	EU ID 12 Heat Rate:	8,960 Btu/hp-hr
Diesel Fuel Heat Content:	137,000 Btu/gal	EU IDs 5-7 Heat Rate:	10,755 Btu/hp-hr	EU ID 13 Heat Rate:	11,852 Btu/kW-hr
Diesel Fuel Density:	7 lb/gal	EU IDs 9 and 10 Heat Rate:	12,022 Btu/hp-hr	EU ID 26 Heat Rate:	10,000 Btu/kW-hr

**Table D-7a. Significant Emission Unit Inventory - VOC Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Limited Potential Emissions	Unlimited Potential Emissions	Estimated Actual Emissions
5	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	0.1 tpy	0.1 tpy	0 tpy
6	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	0.1 tpy	0.1 tpy	0 tpy
7	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	0.1 tpy	0.1 tpy	0 tpy
9	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	0.1 tpy	0.1 tpy	9.7E-04 tpy
10	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	0.1 tpy	0.1 tpy	1.2E-03 tpy
12	Solar Centaur T-4500 Turbine	Fuel Gas	4,500 hp	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	0.4 tpy	0.4 tpy	0.4 tpy
13	Solar Centaur T-5900 Turbine	Fuel Gas	4,270 kW	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	0.5 tpy	0.5 tpy	0.5 tpy
16	Bryan Boiler	Fuel Gas	8.5 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	0.2 tpy	0.2 tpy	0.1 tpy
17	Bryan Boiler	Fuel Gas	8.5 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	0.2 tpy	0.2 tpy	1.1E-02 tpy
20	Detroit Diesel 8V71 Engine (NE)	Diesel	350 hp	AP-42 Table 3.3-1	0.00247 lb/hp-hr	1.3 tpy	3.8 tpy	0.1 tpy
21	Detroit Diesel 8V71 Engine (SW)	Diesel	350 hp	AP-42 Table 3.3-1	0.00247 lb/hp-hr	1.3 tpy	3.8 tpy	0.1 tpy
22	Detroit Diesel Engine	Diesel	405 kW	AP-42 Table 3.3-1	0.00247 lb/hp-hr	0.1 tpy	5.9 tpy	2.0E-03 tpy
23	Detroit Diesel Engine	Diesel	400 kW	AP-42 Table 3.3-1	0.00247 lb/hp-hr	0.1 tpy	5.8 tpy	5.3E-03 tpy
24	Caterpillar 3306B Engine	Diesel	265 bhp	AP-42 Table 3.3-1	0.00247 lb/hp-hr	0.3 tpy	2.9 tpy	2.9E-03 tpy
25	Flare (SF/HP/LP) and Pilot	Fuel Gas	570 MMscf/yr	AP-42 Table 13.5-2	0.66 lb/MMBtu	188.4 tpy	188.4 tpy	9.6 tpy
26	Solar Centaur 50 Turbine - In SoLoNOx	Fuel Gas	5.65 MW	AP-42 Table 3.1-2a	0.0021 lb/MMBtu	0.5 tpy	0.5 tpy	0 tpy
	Solar Centaur 50 Turbine - Out of SoLoNOx							
<b>Total</b>						<b>193.8 tpy</b>	<b>212.9 tpy</b>	<b>10.8 tpy</b>

**Table D-7b. Insignificant Emission Unit Inventory - VOC Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Unlimited Potential Emissions
N/A	Bryan Boiler	Fuel Gas	4.2 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	0.1 tpy
N/A	Burnham PF-510 Boiler #4	Fuel Gas	2.033 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	4.9E-02 tpy <sup>1</sup>
		Diesel		AP-42 Table 1.3-3	0.34 lb/kgal	
N/A	Burnham PF-510 Boiler #5	Fuel Gas	2.033 MMBtu/hr	AP-42 Table 1.4-2	5.5 lb/MMscf	4.9E-02 tpy <sup>1</sup>
		Diesel		AP-42 Table 1.3-3	0.34 lb/kgal	
N/A	Hotsy Portable Pressure Washer Burner	Diesel	197 Btu/hr	AP-42 Table 1.3-3	0.34 lb/kgal	2.1E-06 tpy
N/A	Portable Heaters	Diesel	4 MMBtu/hr, total	AP-42 Table 1.3-3	0.34 lb/kgal	4.3E-02 tpy
N/A	Produced Water Storage Tank	Produced Water	24,900 Gallons	AP-42 Section 7.1 <sup>2</sup>		0.2 tpy
N/A	Motor Room Diesel Day Tank	Diesel	860 Gallons	AP-42 Section 7.1 <sup>3</sup>		5.2E-05 tpy
N/A	Motor Room Diesel Reserve Tank	Diesel	187 Gallons	AP-42 Section 7.1 <sup>3</sup>		5.2E-05 tpy
N/A	Emergency Generator Tanks (2 Tanks)	Diesel	273 Gallons, each	AP-42 Section 7.1 <sup>3</sup>		1.0E-04 tpy
N/A	MSM Diesel Day Tank	Diesel	215 Gallons	AP-42 Section 7.1 <sup>3</sup>		5.2E-05 tpy
N/A	Sullair Diesel Tank	Diesel	100 Gallons	AP-42 Section 7.1 <sup>3</sup>		5.2E-05 tpy
N/A	Crane Diesel Tanks (2 Tanks)	Diesel	140 Gallons, each	AP-42 Section 7.1 <sup>3</sup>		1.0E-04 tpy
N/A	Centaur Turbine Oil Tank	Lube Oil	249 Gallons	NA		0 tpy
N/A	Centaur Lube Oil Tank	Lube Oil	330 Gallons	NA		0 tpy
N/A	Motor Room Hydraulic Oil Tank	Lube Oil	399 Gallons	NA		0 tpy
N/A	Compressor Lube Oil Tanks (2 Tanks)	Lube Oil	85 Gallons, each	NA		0 tpy
N/A	Paraffin Dispersant Tank	Paraffin Dispersant	750 Gallons	NA		0 tpy
N/A	Demulsifier Tank	Demulsifier	550 Gallons	NA		0 tpy
<b>Total</b>						<b>0.4 tpy</b>

**Notes:**

<sup>1</sup> Dual fuel-fired Burnham boiler emissions are based on fuel gas firing which has greater emissions than diesel firing.

<sup>2</sup> Tank emissions calculations for the 24,990-gallon Produced Water Storage Tank are provided in Table 7c. The tank was conservatively calculated as a crude oil tank and is representative of the Waste Storage Tank as a worst-case scenario.

<sup>3</sup> Tank emissions calculations for the 860-gallon diesel tank are provided in Table 7c and is representative of the lower-capacity diesel tanks as a worst-case scenario.

<sup>4</sup> Tank emissions calculations for the 750-gallon Paraffin Dispersant Tank are provided in Table 7c. The tank is conservatively calculated as a lube oil tank and is representative of the lower-capacity lube oil tanks and Demulsifier Tank as a worst-case scenario.

**Conversions:**

Fuel Gas Heat Content:	1,001 Btu/scf	Diesel Engine Heat Rate:	7,000 Btu/hp-hr	EU ID 12 Heat Rate:	8,960 Btu/hp-hr
Diesel Fuel Heat Content:	137,000 Btu/gal	EU IDs 5-7 Heat Rate:	10,755 Btu/hp-hr	EU ID 13 Heat Rate:	11,852 Btu/kW-hr
Diesel Fuel Density:	7 lb/gal	EU IDs 9 and 10 Heat Rate:	12,022 Btu/hp-hr	EU ID 26 Heat Rate:	10,000 Btu/kW-hr

Table D-7c. Tank VOC Emissions Summary  
Hilcorp Alaska, LLC - Dolly Varden Platform

Tank Emission Calculations <sup>1</sup>			
Parameter	Produced Water Tank	Diesel Tank	Equation
<b>Standing Loss (Ls) Calculations</b>			
Vapor Space Expansion Factor, $K_E$	3.9E-02	3.9E-02	Eq. 1-12
Effective Height, $H_E$ (ft)	9.42	3.93	Eq. 1-15
Vapor Space Outage, $H_{VO}$ (ft)	4.71	1.96	Eq. 1-15
Average Daily Temp, $T_{AA}$ (°R)	496.22	496.22	Eq. 1-30
Liquid Bulk Temp, $T_B$ (°R)	498.00	498.00	Eq. 1-31
Average Daily Liquid Temp, $T_{LA}$ (°R)	500.27	500.27	Eq. 1-28
Vapor Pressure, $P_{VA}$ (psia)	1.4E+00	3.3E-03	Eq. 1-25
Vented Vapor Sat Factor, $K_S$	0.74	1.00	Eq. 1-21
Average Vapor Temp, $T_V$ (°R)	502.11	502.11	Eq. 1-33
Vapor Density, $W_V$ (lb/ft <sup>3</sup> )	1.3E-02	8.0E-05	Eq. 1-22
Effective Diameter, $D_E$ (ft)	21.41	6.18	Eq. 1-14
Vapor Space Volume, $V_V$ (ft <sup>3</sup> )	1,696.46	58.90	Eq. 1-3
Standing Loss, $L_S$ (lb/yr)	233.23	0.07	Eq. 1-2
<b>Working Loss (Lw) Calculations</b>			
Annual Sum Liquid, $\Sigma H_{bl}$ (ft/yr)	36.98	15.33	Eq. 1-37
Maximum Liquid Height, $H_X$ (ft)	9.42	3.93	Eq. 1-36
Minimum Liquid Height, $H_N$ (ft)	0	0	Eq. 1-36
Number of Turnovers, $N$	4	4	Eq. 1-36
Factors, $K_N, K_B$	1	1	Eq. 1-35
Factor, $K_P$	0.75	1	Eq. 1-35
Net Working Loss, $V_Q$ (ft <sup>3</sup> /yr)	13,313	460	Eq. 1-39
Working Loss, $L_W$ (lb/yr)	129.47	0.04	Eq. 1-35
<b>Potential Emissions (tpy)</b>			
Total VOCs per Tank (tpy)	1.8E-01	5.2E-05	Eq. 1-1
Total Benzene per Tank (tpy)	2.6E-03	1.3E-06	--
Total Cumene per Tank (tpy)	1.8E-05	2.6E-08	--
Total Ethylbenzene per Tank (tpy)	1.1E-04	1.7E-07	--
Total Hexane per Tank (tpy)	6.8E-03	2.9E-06	--
Total Toluene per Tank (tpy)	2.3E-03	1.1E-06	--
Total Xylenes per Tank (tpy)	7.3E-05	6.8E-08	--

Notes:

<sup>1</sup> Reference: AP-42 Section 7.1.

<sup>2</sup> Diesel and produced water tanks' throughput assumed to be one tank volume per quarter.

<sup>3</sup> EPA SPECIATE online profiles.

Tank Information		
Parameter	Produced Water Tank	Diesel Tank
Tank Contents	Produced Water	Diesel
Tank Capacity (gal)	24,900	860
Orientation	Horizontal	Horizontal
Diameter (ft)	12	5
Length/Height (ft)	30	6
Color	Grey	Grey
Throughput (gal/yr) <sup>2</sup>	99,600	3,440
Paint Condition	Average	Average
Paint Solar Absorptance, $\alpha$	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 <sup>2</sup> -d	

Fuel Constants		
Parameter	Diesel	Crude
Vapor Molecular Weight, $M_V$ (lb/lb-mol)	130	50
Vapor Pressure Constant, $A$	12.101	11.5
Vapor Pressure Constant, $B$ (°R)	8,907.0	5,575.3
Reid Vapor Pressure (psi)	N/A	4.0

Component Vapor Mass Fraction <sup>3</sup>		
Component	Diesel	Crude
Benzene	0.0257	0.0141
Cumene	0.0005	0.0001
Ethylbenzene	0.0032	0.0006
Hexane	0.0561	0.0375
Toluene	0.0206	0.0125
Xylenes	0.0013	0.0004

**Table D-8a. Significant Emission Unit Inventory - SO<sub>2</sub> Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Limited Potential Emissions	Unlimited Potential Emissions	Estimated Actual Emissions
5	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	Mass Balance	2,000 ppmv H <sub>2</sub> S <sup>1</sup>	19.0 tpy	19.0 tpy	0 tpy
6	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	Mass Balance	2,000 ppmv H <sub>2</sub> S <sup>1</sup>	19.0 tpy	19.0 tpy	0 tpy
7	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	Mass Balance	2,000 ppmv H <sub>2</sub> S <sup>1</sup>	19.0 tpy	19.0 tpy	0 tpy
9	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	Mass Balance	2,000 ppmv H <sub>2</sub> S <sup>1</sup>	21.3 tpy	21.3 tpy	0.2 tpy
10	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	Mass Balance	2,000 ppmv H <sub>2</sub> S <sup>1</sup>	21.3 tpy	21.3 tpy	0.2 tpy
12	Solar Centaur T-4500 Turbine	Fuel Gas	4,500 hp	Mass Balance	2,000 ppmv H <sub>2</sub> S <sup>1</sup>	59.4 tpy	59.4 tpy	58.5 tpy
13	Solar Centaur T-5900 Turbine	Fuel Gas	4,270 kW	Mass Balance	1,000 ppmv H <sub>2</sub> S <sup>2</sup>	37.3 tpy	37.3 tpy	37.0 tpy
16	Bryan Boiler	Fuel Gas	8.5 MMBtu/hr	Mass Balance	2,000 ppmv H <sub>2</sub> S <sup>1</sup>	12.5 tpy	12.5 tpy	5.0 tpy
17	Bryan Boiler	Fuel Gas	8.5 MMBtu/hr	Mass Balance	2,000 ppmv H <sub>2</sub> S <sup>1</sup>	12.5 tpy	12.5 tpy	0.7 tpy
20	Detroit Diesel 8V71 Engine (NE)	Diesel	350 hp	Mass Balance	0.5 wt% S <sup>3</sup>	1.9 tpy	5.5 tpy	0.2 tpy
21	Detroit Diesel 8V71 Engine (SW)	Diesel	350 hp	Mass Balance	0.5 wt% S <sup>3</sup>	1.9 tpy	5.5 tpy	0.1 tpy
22	Detroit Diesel Engine	Diesel	405 kW	Mass Balance	0.5 wt% S <sup>3</sup>	0.1 tpy	8.5 tpy	2.9E-03 tpy
23	Detroit Diesel Engine	Diesel	400 kW	Mass Balance	0.5 wt% S <sup>3</sup>	0.1 tpy	8.4 tpy	7.7E-03 tpy
24	Caterpillar 3306B Engine	Diesel	265 bhp	Mass Balance	0.5 wt% S <sup>3</sup>	0.5 tpy	4.2 tpy	4.3E-03 tpy
25	Flare (SF/HP/LP) and Pilot	Fuel Gas	570 MMscf/yr	Mass Balance	2,000 ppmv H <sub>2</sub> S <sup>1</sup>	96.0 tpy	96.0 tpy	4.9 tpy
26	Solar Centaur 50 Turbine - In SoLoNOx	Fuel Gas	5.65 MW	Mass Balance	1,000 ppmv H <sub>2</sub> S <sup>2</sup>	41.6 tpy	41.6 tpy	0 tpy
	Solar Centaur 50 Turbine - Out of SoLoNOx							
<b>Total</b>						<b>363.5 tpy</b>	<b>391.0 tpy</b>	<b>106.7 tpy</b>

**Table D-8b. Insignificant Emission Unit Inventory - SO<sub>2</sub> Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Unlimited Potential Emissions
N/A	Bryan Boiler	Fuel Gas	4.2 MMBtu/hr	Mass Balance	2,000 ppmv H <sub>2</sub> S <sup>1</sup>	6.2 tpy
N/A	Burnham PF-510 Boiler #4	Fuel Gas	2.033 MMBtu/hr	Mass Balance	2,000 ppmv H <sub>2</sub> S <sup>1</sup>	4.5 tpy <sup>4</sup>
		Diesel		Mass Balance	0.5 wt% S <sup>3</sup>	
N/A	Burnham PF-510 Boiler #5	Fuel Gas	2.033 MMBtu/hr	Mass Balance	2,000 ppmv H <sub>2</sub> S <sup>1</sup>	4.5 tpy <sup>4</sup>
		Diesel		Mass Balance	0.5 wt% S <sup>3</sup>	
N/A	Hotsy Portable Pressure Washer Burner	Diesel	197 Btu/hr	Mass Balance	0.5 wt% S <sup>3</sup>	4.4E-04 tpy
N/A	Portable Heaters	Diesel	4 MMBtu/hr, total	Mass Balance	0.5 wt% S <sup>3</sup>	9.0 tpy
N/A	Produced Water Storage Tank	Produced Water	24900 Gallons	N/A	N/A	N/A
N/A	Motor Room Diesel Day Tank	Diesel	860 Gallons	N/A	N/A	N/A
N/A	Motor Room Diesel Reserve Tank	Diesel	187 Gallons	N/A	N/A	N/A
N/A	Emergency Generator Tanks (2 Tanks)	Diesel	273 Gallons, each	N/A	N/A	N/A
N/A	MSM Diesel Day Tank	Diesel	215 Gallons	N/A	N/A	N/A
N/A	Sullair Diesel Tank	Diesel	100 Gallons	N/A	N/A	N/A
N/A	Crane Diesel Tanks (2 Tanks)	Diesel	140 Gallons, each	N/A	N/A	N/A
N/A	Centaur Turbine Oil Tank	Lube Oil	249 Gallons	N/A	N/A	N/A
N/A	Centaur Lube Oil Tank	Lube Oil	330 Gallons	N/A	N/A	N/A
N/A	Motor Room Hydraulic Oil Tank	Lube Oil	399 Gallons	N/A	N/A	N/A
N/A	Compressor Lube Oil Tanks (2 Tanks)	Lube Oil	85 Gallons, each	N/A	N/A	N/A
N/A	Paraffin Dispersant Tank	Paraffin Dispersant	750 Gallons	N/A	N/A	N/A
N/A	Demulsifier Tank	Demulsifier	550 Gallons	N/A	N/A	N/A
<b>Total</b>						<b>24.2 tpy</b>

**Notes:**

<sup>1</sup> The fuel gas for all fuel gas-fired EUs (except EU IDs 13 and 26) is limited to 2,000 ppmv H<sub>2</sub>S per Condition 5.2 of Permit No. AQ0060MSS03.

<sup>2</sup> The fuel gas for EU IDs 13 and 26 is limited to 1,000 ppmv H<sub>2</sub>S per Condition 5.2 of Permit No. AQ0060MSS03.

<sup>3</sup> The sulfur content of diesel burned is limited to 0.5 wt.% S per Condition 16.1 of Permit No. AQ0060MSS03.

<sup>4</sup> Dual fuel fired Burnham boiler emissions are based on diesel fuel firing which has greater emissions than fuel gas firing.

**Conversions:**

Fuel Gas Heat Content:	1,001 Btu/scf	Diesel Engine Heat Rate:	7,000 Btu/hp-hr	EU ID 12 Heat Rate:	8,960 Btu/hp-hr
Diesel Fuel Heat Content:	137,000 Btu/gal	EU IDs 5-7 Heat Rate:	10,755 Btu/hp-hr	EU ID 13 Heat Rate:	11,852 Btu/kW-hr
Diesel Fuel Density:	7 lb/gal	EU IDs 9 and 10 Heat Rate:	12,022 Btu/hp-hr	EU ID 26 Heat Rate:	10,000 Btu/kW-hr

**Table D-9a. Significant Emission Unit Inventory - CO<sub>2</sub>e Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Limited Potential Emissions	Unlimited Potential Emissions	Estimated Actual Emissions
5	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	40 CFR 98 Table C-1 & 2	53.11 kg/MMBtu	6,619.3 tpy	6,619.3 tpy	0 tpy
6	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	40 CFR 98 Table C-1 & 2	53.11 kg/MMBtu	6,619.3 tpy	6,619.3 tpy	0 tpy
7	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	40 CFR 98 Table C-1 & 2	53.11 kg/MMBtu	6,619.3 tpy	6,619.3 tpy	0 tpy
9	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	40 CFR 98 Table C-1 & 2	53.11 kg/MMBtu	7,399.1 tpy	7,399.1 tpy	54.1 tpy
10	Solar Saturn T-1200 Turbine	Fuel Gas	1,200 hp	40 CFR 98 Table C-1 & 2	53.11 kg/MMBtu	7,399.1 tpy	7,399.1 tpy	69.3 tpy
12	Solar Centaur T-4500 Turbine	Fuel Gas	4,500 hp	40 CFR 98 Table C-1 & 2	53.11 kg/MMBtu	20,679.5 tpy	20,679.5 tpy	20,360.8 tpy
13	Solar Centaur T-5900 Turbine	Fuel Gas	4,270 kW	40 CFR 98 Table C-1 & 2	53.11 kg/MMBtu	25,956.1 tpy	25,956.1 tpy	25,757.6 tpy
16	Bryan Boiler	Fuel Gas	8.5 MMBtu/hr	40 CFR 98 Table C-1 & 2	53.11 kg/MMBtu	4,359.5 tpy	4,359.5 tpy	1,726.4 tpy
17	Bryan Boiler	Fuel Gas	8.5 MMBtu/hr	40 CFR 98 Table C-1 & 2	53.11 kg/MMBtu	4,359.5 tpy	4,359.5 tpy	231.9 tpy
20	Detroit Diesel 8V71 Engine (NE)	Diesel	350 hp	40 CFR 98 Table C-1 & 2	74.21 kg/MMBtu	601.3 tpy	1,755.7 tpy	56.7 tpy
21	Detroit Diesel 8V71 Engine (SW)	Diesel	350 hp	40 CFR 98 Table C-1 & 2	74.21 kg/MMBtu	601.3 tpy	1,755.7 tpy	34.9 tpy
22	Detroit Diesel Engine	Diesel	405 kW	40 CFR 98 Table C-1 & 2	74.21 kg/MMBtu	37.3 tpy	2,724.4 tpy	0.9 tpy
23	Detroit Diesel Engine	Diesel	400 kW	40 CFR 98 Table C-1 & 2	74.21 kg/MMBtu	36.9 tpy	2,690.8 tpy	2.5 tpy
24	Caterpillar 3306B Engine	Diesel	265 bhp	40 CFR 98 Table C-1 & 2	74.21 kg/MMBtu	151.7 tpy	1,329.3 tpy	1.4 tpy
25	Flare (SF/HP/LP) and Pilot	Fuel Gas	570 MMscf/yr	40 CFR 98 Table C-1 & 2	53.11 kg/MMBtu	33,419.3 tpy	33,419.3 tpy	1,711.7 tpy
26	Solar Centaur 50 Turbine - In SoLoNOx	Fuel Gas	5.65 MW	40 CFR 98 Table C-1 & 2	53.11 kg/MMBtu	28,978.0 tpy	28,978.0 tpy	0 tpy
	Solar Centaur 50 Turbine - Out of SoLoNOx							
<b>Total</b>						<b>153,836.4 tpy</b>	<b>162,663.8 tpy</b>	<b>50,008.0 tpy</b>

**Table D-9b. Insignificant Emission Unit Inventory - CO<sub>2</sub>e Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

EU ID	Emission Unit Name	Fuel	Rating/Size	Reference	Emission Factor	Unlimited Potential Emissions
N/A	Bryan Boiler	Fuel Gas	4.2 MMBtu/hr	40 CFR 98 Table C-1 & 2	53.11 kg/MMBtu	2,154.1 tpy
N/A	Burnham PF-510 Boiler #4	Fuel Gas	2.033 MMBtu/hr	40 CFR 98 Table C-1 & 2	53.11 kg/MMBtu	1,456.9 tpy <sup>1</sup>
		Diesel		40 CFR 98 Table C-1 & 2	74.21 kg/MMBtu	
N/A	Burnham PF-510 Boiler #5	Fuel Gas	2.033 MMBtu/hr	40 CFR 98 Table C-1 & 2	53.11 kg/MMBtu	1,456.9 tpy <sup>1</sup>
		Diesel		40 CFR 98 Table C-1 & 2	74.21 kg/MMBtu	
N/A	Hotsy Portable Pressure Washer Burner	Diesel	197 Btu/hr	40 CFR 98 Table C-1 & 2	74.21 kg/MMBtu	0.1 tpy
N/A	Portable Heaters	Diesel	4 MMBtu/hr, total	40 CFR 98 Table C-1 & 2	74.21 kg/MMBtu	2,866.5 tpy
N/A	Produced Water Storage Tank	Produced Water	24,900 Gallons	N/A	N/A	N/A
N/A	Motor Room Diesel Day Tank	Diesel	860 Gallons	N/A	N/A	N/A
N/A	Motor Room Diesel Reserve Tank	Diesel	187 Gallons	N/A	N/A	N/A
N/A	Emergency Generator Tanks (2 Tanks)	Diesel	273 Gallons, each	N/A	N/A	N/A
N/A	MSM Diesel Day Tank	Diesel	215 Gallons	N/A	N/A	N/A
N/A	Sullair Diesel Tank	Diesel	100 Gallons	N/A	N/A	N/A
N/A	Crane Diesel Tanks (2 Tanks)	Diesel	140 Gallons, each	N/A	N/A	N/A
N/A	Centaur Turbine Oil Tank	Lube Oil	249 Gallons	N/A	N/A	N/A
N/A	Centaur Lube Oil Tank	Lube Oil	330 Gallons	N/A	N/A	N/A
N/A	Motor Room Hydraulic Oil Tank	Lube Oil	399 Gallons	N/A	N/A	N/A
N/A	Compressor Lube Oil Tanks (2 Tanks)	Lube Oil	85 Gallons, each	N/A	N/A	N/A
N/A	Paraffin Dispersant Tank	Paraffin Dispersant	750 Gallons	N/A	N/A	N/A
N/A	Demulsifier Tank	Demulsifier	550 Gallons	N/A	N/A	N/A
<b>Total</b>						<b>7,934.5 tpy</b>

**Notes:**

<sup>1</sup> Dual fuel fired Burnham boiler emissions are based on diesel fuel firing which has greater emissions than fuel gas firing.

**Conversions:**

Fuel Gas Heat Content:	1,001 Btu/scf	Diesel Engine Heat Rate:	7,000 Btu/hp-hr	EU ID 12 Heat Rate:	8,960 Btu/hp-hr
Diesel Fuel Heat Content:	137,000 Btu/gal	EU IDs 5-7 Heat Rate:	10,755 Btu/hp-hr	EU ID 13 Heat Rate:	11,852 Btu/kW-hr
Diesel Fuel Density:	7 lb/gal	EU IDs 9 and 10 Heat Rate:	12,022 Btu/hp-hr	EU ID 26 Heat Rate:	10,000 Btu/kW-hr

**Table D-10. Gas-Fired Turbines - Estimated Actual and Potential HAP Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

CAS No.	Hazardous Air Pollutant	Emission Factor <sup>1</sup>	Limited/Unlimited Potential Emissions <sup>2</sup>					Estimated Actual Emissions <sup>2</sup>								
			EU IDs 5-7, each	EU IDs 9-10, each	EU ID 12	EU ID 13	EU ID 26	EU ID 5	EU ID 6	EU ID 7	EU ID 9	EU ID 10	EU ID 12	EU ID 13	EU ID 26	
106990	1,3 Butadiene	4.30E-07 lb/MMBtu	2.4E-05 tpy	2.7E-05 tpy	7.6E-05 tpy	9.5E-05 tpy	1.1E-04 tpy	0 tpy	0 tpy	0 tpy	2.0E-07 tpy	2.5E-07 tpy	7.5E-05 tpy	9.5E-05 tpy	0 tpy	
75070	Acetaldehyde	4.00E-05 lb/MMBtu	2.3E-03 tpy	2.5E-03 tpy	7.1E-03 tpy	8.9E-03 tpy	9.9E-03 tpy	0 tpy	0 tpy	0 tpy	1.8E-05 tpy	2.4E-05 tpy	7.0E-03 tpy	8.8E-03 tpy	0 tpy	
107028	Acrolein	6.40E-06 lb/MMBtu	3.6E-04 tpy	4.0E-04 tpy	1.1E-03 tpy	1.4E-03 tpy	1.6E-03 tpy	0 tpy	0 tpy	0 tpy	3.0E-06 tpy	3.8E-06 tpy	1.1E-03 tpy	1.4E-03 tpy	0 tpy	
71432	Benzene	1.20E-05 lb/MMBtu	6.8E-04 tpy	7.6E-04 tpy	2.1E-03 tpy	2.7E-03 tpy	3.0E-03 tpy	0 tpy	0 tpy	0 tpy	5.5E-06 tpy	7.1E-06 tpy	2.1E-03 tpy	2.6E-03 tpy	0 tpy	
100414	Ethyl benzene	3.20E-05 lb/MMBtu	1.8E-03 tpy	2.0E-03 tpy	5.7E-03 tpy	7.1E-03 tpy	7.9E-03 tpy	0 tpy	0 tpy	0 tpy	1.5E-05 tpy	1.9E-05 tpy	5.6E-03 tpy	7.0E-03 tpy	0 tpy	
5000	Formaldehyde	7.10E-04 lb/MMBtu	4.0E-02 tpy	4.5E-02 tpy	0.1 tpy	0.2 tpy	0.2 tpy	0 tpy	0 tpy	0 tpy	3.3E-04 tpy	4.2E-04 tpy	0.1 tpy	0.2 tpy	0 tpy	
91203	Naphthalene	1.30E-06 lb/MMBtu	7.3E-05 tpy	8.2E-05 tpy	2.3E-04 tpy	2.9E-04 tpy	3.2E-04 tpy	0 tpy	0 tpy	0 tpy	6.0E-07 tpy	7.7E-07 tpy	2.3E-04 tpy	2.9E-04 tpy	0 tpy	
N/A	Polycyclic Organic Matter	2.20E-06 lb/MMBtu	1.2E-04 tpy	1.4E-04 tpy	3.9E-04 tpy	4.9E-04 tpy	5.4E-04 tpy	0 tpy	0 tpy	0 tpy	1.0E-06 tpy	1.3E-06 tpy	3.8E-04 tpy	4.8E-04 tpy	0 tpy	
75569	Propylene Oxide	2.90E-05 lb/MMBtu	1.6E-03 tpy	1.8E-03 tpy	5.1E-03 tpy	6.4E-03 tpy	7.2E-03 tpy	0 tpy	0 tpy	0 tpy	1.3E-05 tpy	1.7E-05 tpy	5.0E-03 tpy	6.4E-03 tpy	0 tpy	
108883	Toluene	1.30E-04 lb/MMBtu	7.3E-03 tpy	8.2E-03 tpy	2.3E-02 tpy	2.9E-02 tpy	3.2E-02 tpy	0 tpy	0 tpy	0 tpy	6.0E-05 tpy	7.7E-05 tpy	2.3E-02 tpy	2.9E-02 tpy	0 tpy	
106423	Xylenes	6.40E-05 lb/MMBtu	3.6E-03 tpy	4.0E-03 tpy	1.1E-02 tpy	1.4E-02 tpy	1.6E-02 tpy	0 tpy	0 tpy	0 tpy	3.0E-05 tpy	3.8E-05 tpy	1.1E-02 tpy	1.4E-02 tpy	0 tpy	
<b>Total</b>			<b>0.1 tpy</b>	<b>0.1 tpy</b>	<b>0.2 tpy</b>	<b>0.2 tpy</b>	<b>0.3 tpy</b>	<b>0 tpy</b>	<b>0 tpy</b>	<b>0 tpy</b>	<b>4.7E-04 tpy</b>	<b>6.1E-04 tpy</b>	<b>0.2 tpy</b>	<b>0.2 tpy</b>	<b>0 tpy</b>	

**Notes:**

<sup>1</sup> Reference: AP-42, Table 3.1-3.

<sup>2</sup> Total heat consumption based on operation as noted below:

EU ID	Rating	Limited/Unlimited Potential Operation		Estimated Actual Operation	
5	1,200 hp	113,057 MMBtu @	8,760 hr/yr	0 MMBtu @	0 hr/yr
6	1,200 hp	113,057 MMBtu @	8,760 hr/yr	0 MMBtu @	0 hr/yr
7	1,200 hp	113,057 MMBtu @	8,760 hr/yr	0 MMBtu @	0 hr/yr
9	1,200 hp	126,375 MMBtu @	8,760 hr/yr	923 MMBtu @	64 hr/yr
10	1,200 hp	126,375 MMBtu @	8,760 hr/yr	1,183 MMBtu @	82 hr/yr
12	4,500 hp	353,203 MMBtu @	8,760 hr/yr	347,760 MMBtu @	8,625 hr/yr
13	4,270 kW	443,326 MMBtu @	8,760 hr/yr	439,936 MMBtu @	8,693 hr/yr
26	5.65 MW	494,940 MMBtu @	8,760 hr/yr	0 MMBtu @	0 hr/yr

**Conversions:**

EU IDs 5-7 Heat Rate:	10,755 Btu/hp-hr	EU ID 13 Heat Rate:	11,852 Btu/kW-hr
EU IDs 9 and 10 Heat Rate:	12,022 Btu/hp-hr	EU ID 26 Heat Rate:	10,000 Btu/kW-hr
EU ID 12 Heat Rate:	8,960 Btu/hp-hr		

**Table D-11. Gas-Fired Heaters - Estimated Actual and Potential HAP Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

CAS No.	Hazardous Air Pollutant	Emission Factor <sup>1</sup>	Limited/Unlimited Potential Emissions <sup>2</sup>			Estimated Actual Emissions <sup>2</sup>	
			EU IDs 16, 17, each	Insig. Bryan Boiler	Insig. Burnham Boilers, each	EU ID 16	EU ID 17
71432	Benzene	2.10E-03 lb/MMscf	7.8E-05 tpy	3.9E-05 tpy	1.9E-05 tpy	3.1E-05 tpy	4.2E-06 tpy
106467	Dichlorobenzene	1.20E-03 lb/MMscf	4.5E-05 tpy	2.2E-05 tpy	1.1E-05 tpy	1.8E-05 tpy	2.4E-06 tpy
5000	Formaldehyde	7.50E-02 lb/MMscf	2.8E-03 tpy	1.4E-03 tpy	6.7E-04 tpy	1.1E-03 tpy	1.5E-04 tpy
110543	N-Hexane	1.80E+00 lb/MMscf	0.1 tpy	3.3E-02 tpy	1.6E-02 tpy	2.7E-02 tpy	3.6E-03 tpy
91203	Naphthalene	6.10E-04 lb/MMscf	2.3E-05 tpy	1.1E-05 tpy	5.4E-06 tpy	9.0E-06 tpy	1.2E-06 tpy
N/A	Polycyclic Organic Matter (POM)	8.82E-05 lb/MMscf	3.3E-06 tpy	1.6E-06 tpy	7.8E-07 tpy	1.3E-06 tpy	1.7E-07 tpy
108883	Toluene	3.40E-03 lb/MMscf	1.3E-04 tpy	6.2E-05 tpy	3.0E-05 tpy	5.0E-05 tpy	6.7E-06 tpy
N/A	Arsenic Compounds	2.00E-04 lb/MMscf	7.4E-06 tpy	3.7E-06 tpy	1.8E-06 tpy	2.9E-06 tpy	4.0E-07 tpy
N/A	Beryllium Compounds	1.20E-05 lb/MMscf	4.5E-07 tpy	2.2E-07 tpy	1.1E-07 tpy	1.8E-07 tpy	2.4E-08 tpy
N/A	Cadmium Compounds	1.10E-03 lb/MMscf	4.1E-05 tpy	2.0E-05 tpy	9.8E-06 tpy	1.6E-05 tpy	2.2E-06 tpy
N/A	Chromium Compounds	1.40E-03 lb/MMscf	5.2E-05 tpy	2.6E-05 tpy	1.2E-05 tpy	2.1E-05 tpy	2.8E-06 tpy
N/A	Cobalt Compounds	8.40E-05 lb/MMscf	3.1E-06 tpy	1.5E-06 tpy	7.5E-07 tpy	1.2E-06 tpy	1.7E-07 tpy
N/A	Lead Compounds	5.00E-04 lb/MMscf	1.9E-05 tpy	9.2E-06 tpy	4.4E-06 tpy	7.4E-06 tpy	9.9E-07 tpy
N/A	Manganese Compounds	3.80E-04 lb/MMscf	1.4E-05 tpy	7.0E-06 tpy	3.4E-06 tpy	5.6E-06 tpy	7.5E-07 tpy
N/A	Mercury Compounds	2.60E-04 lb/MMscf	9.7E-06 tpy	4.8E-06 tpy	2.3E-06 tpy	3.8E-06 tpy	5.1E-07 tpy
N/A	Nickel Compounds	2.10E-03 lb/MMscf	7.8E-05 tpy	3.9E-05 tpy	1.9E-05 tpy	3.1E-05 tpy	4.2E-06 tpy
N/A	Selenium Compounds	2.40E-05 lb/MMscf	8.9E-07 tpy	4.4E-07 tpy	2.1E-07 tpy	3.5E-07 tpy	4.7E-08 tpy
<b>Total</b>			<b>0.1 tpy</b>	<b>3.5E-02 tpy</b>	<b>1.7E-02 tpy</b>	<b>2.8E-02 tpy</b>	<b>3.7E-03 tpy</b>

**Notes:**

<sup>1</sup> Reference: AP-42, Table 1.4-2, 1.4-3, and 1.4-4.

<sup>2</sup> Total heat consumption based on operation as noted below:

EU ID	Rating	Limited/Unlimited Potential Operation		Estimated Actual Operation	
16	8.5 MMBtu/hr	74.4 MMscf @	8,760 hr/yr	29.4 MMscf @	3,469 hr/yr
17	8.5 MMBtu/hr	74.4 MMscf @	8,760 hr/yr	4.0 MMscf @	466 hr/yr
Bryan Boiler	4.2 MMBtu/hr	36.7 MMscf @	8,760 hr/yr	N/A	
Burnham PF-510 Boiler #4	2.033 MMBtu/hr	17.8 MMscf @	8,760 hr/yr	N/A	
Burnham PF-510 Boiler #5	2.033 MMBtu/hr	17.8 MMscf @	8,760 hr/yr	N/A	

**Conversions:**

Fuel Gas Heat Content:	1,001 Btu/scf
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**Table D-12. Insignificant Diesel-Fired Heaters and Boilers - Estimated Actual and Potential HAP Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

CAS No.	Hazardous Air Pollutant	Emission Factor <sup>1</sup>	Unlimited Potential Emissions <sup>2,3</sup>	
			Insig. Pressure Washer	Insig. Portable Heaters
71556	1,1,1-Trichloroethane	2.36E-04 lb/kgal	1.5E-09 tpy	3.0E-05 tpy
71432	Benzene	2.14E-04 lb/kgal	1.3E-09 tpy	2.7E-05 tpy
100414	Ethyl benzene	6.36E-05 lb/kgal	4.0E-10 tpy	8.1E-06 tpy
5000	Formaldehyde	3.30E-02 lb/kgal	2.1E-07 tpy	4.2E-03 tpy
91203	Naphthalene	1.13E-03 lb/kgal	7.1E-09 tpy	1.4E-04 tpy
N/A	Polycyclic Organic Matter	3.30E-03 lb/kgal	2.1E-08 tpy	4.2E-04 tpy
108883	Toluene	6.20E-03 lb/kgal	3.9E-08 tpy	7.9E-04 tpy
106423	Xylenes (isomers and mixture)	1.09E-04 lb/kgal	6.9E-10 tpy	1.4E-05 tpy
N/A	Arsenic Compounds	4 lb/10 <sup>12</sup> Btu	3.5E-09 tpy	7.0E-05 tpy
N/A	Beryllium Compounds	3 lb/10 <sup>12</sup> Btu	2.6E-09 tpy	5.3E-05 tpy
N/A	Cadmium Compounds	3 lb/10 <sup>12</sup> Btu	2.6E-09 tpy	5.3E-05 tpy
N/A	Chromium Compounds	3 lb/10 <sup>12</sup> Btu	2.6E-09 tpy	5.3E-05 tpy
N/A	Lead Compounds	9 lb/10 <sup>12</sup> Btu	7.8E-09 tpy	1.6E-04 tpy
N/A	Manganese Compounds	6 lb/10 <sup>12</sup> Btu	5.2E-09 tpy	1.1E-04 tpy
N/A	Mercury Compounds	3 lb/10 <sup>12</sup> Btu	2.6E-09 tpy	5.3E-05 tpy
N/A	Nickel Compounds	3 lb/10 <sup>12</sup> Btu	2.6E-09 tpy	5.3E-05 tpy
N/A	Selenium Compounds	15 lb/10 <sup>12</sup> Btu	1.3E-08 tpy	2.6E-04 tpy
<b>Total</b>			<b>3.2E-07 tpy</b>	<b>6.5E-03 tpy</b>

**Notes:**

<sup>1</sup> Reference: AP-42, Tables 1.3-8, 1.3-9, and 1.3-10.

<sup>2</sup> Total heat consumption based on maximum full-time operation as noted below:

<u>EU ID</u>	<u>Rating</u>	<u>Unlimited Potential Operation</u>		
Burnham PF-510 Boiler #4	2.033 MMBtu/hr	130.0	kgal @	8,760 hr/yr
		0.02	10 <sup>12</sup> Btu @	8,760 hr/yr
Burnham PF-510 Boiler #5	2.033 MMBtu/hr	130.0	kgal @	8,760 hr/yr
		0.02	10 <sup>12</sup> Btu @	8,760 hr/yr
Hotsy Portable Pressure Washer Burner	197 Btu/hr	0.01	kgal @	8,760 hr/yr
		1.7E-06	10 <sup>12</sup> Btu @	8,760 hr/yr
Portable Heaters	4 MMBtu/hr, total	255.8	kgal @	8,760 hr/yr
		0.04	10 <sup>12</sup> Btu @	8,760 hr/yr

<sup>3</sup> Dual fuel-fired Burnham boiler emissions are based on fuel gas firing which has greater emissions than diesel firing.

**Conversions:**

Diesel Fuel Heat Content: 137,000 Btu/gal

**Table D-13. Diesel-Fired Engines ≤ 600 hp - Estimated Actual and Potential HAP Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

CAS No.	Chemical Name	Emission Factor <sup>1</sup>	Limited Potential Emissions <sup>2</sup>				Unlimited Potential Emissions <sup>2</sup>				Estimated Actual Emissions <sup>2</sup>				
			EU IDs 20, 21, each	EU ID 22	EU ID 23	EU ID 24	EU IDs 20, 21, each	EU ID 22	EU ID 23	EU ID 24	EU ID 20	EU ID 21	EU ID 22	EU ID 23	EU ID 24
106990	1,3-Butadiene	3.91E-05 lb/MMBtu	1.4E-04 tpy	8.9E-06 tpy	8.8E-06 tpy	3.6E-05 tpy	4.2E-04 tpy	6.5E-04 tpy	6.4E-04 tpy	3.2E-04 tpy	1.4E-05 tpy	8.3E-06 tpy	2.2E-07 tpy	5.9E-07 tpy	3.3E-07 tpy
75070	Acetaldehyde	7.67E-04 lb/MMBtu	2.8E-03 tpy	1.7E-04 tpy	1.7E-04 tpy	7.1E-04 tpy	8.2E-03 tpy	1.3E-02 tpy	1.3E-02 tpy	6.2E-03 tpy	2.7E-04 tpy	1.6E-04 tpy	4.4E-06 tpy	1.2E-05 tpy	6.4E-06 tpy
107028	Acrolein	9.25E-05 lb/MMBtu	3.4E-04 tpy	2.1E-05 tpy	2.1E-05 tpy	8.6E-05 tpy	9.9E-04 tpy	1.5E-03 tpy	1.5E-03 tpy	7.5E-04 tpy	3.2E-05 tpy	2.0E-05 tpy	5.3E-07 tpy	1.4E-06 tpy	7.7E-07 tpy
71432	Benzene	9.33E-04 lb/MMBtu	3.4E-03 tpy	2.1E-04 tpy	2.1E-04 tpy	8.7E-04 tpy	1.0E-02 tpy	1.6E-02 tpy	1.5E-02 tpy	7.6E-03 tpy	3.2E-04 tpy	2.0E-04 tpy	5.3E-06 tpy	1.4E-05 tpy	7.8E-06 tpy
5000	Formaldehyde	1.18E-03 lb/MMBtu	4.3E-03 tpy	2.7E-04 tpy	2.7E-04 tpy	1.1E-03 tpy	1.3E-02 tpy	2.0E-02 tpy	1.9E-02 tpy	9.6E-03 tpy	4.1E-04 tpy	2.5E-04 tpy	6.7E-06 tpy	1.8E-05 tpy	9.9E-06 tpy
N/A	Polycyclic Organic Matter	1.68E-04 lb/MMBtu	6.2E-04 tpy	3.8E-05 tpy	3.8E-05 tpy	1.6E-04 tpy	1.8E-03 tpy	2.8E-03 tpy	2.8E-03 tpy	1.4E-03 tpy	5.8E-05 tpy	3.6E-05 tpy	9.6E-07 tpy	2.5E-06 tpy	1.4E-06 tpy
108883	Toluene	4.09E-04 lb/MMBtu	1.5E-03 tpy	9.3E-05 tpy	9.2E-05 tpy	3.8E-04 tpy	4.4E-03 tpy	6.8E-03 tpy	6.7E-03 tpy	3.3E-03 tpy	1.4E-04 tpy	8.7E-05 tpy	2.3E-06 tpy	6.1E-06 tpy	3.4E-06 tpy
106423	Xylenes (isomers and mixture)	2.85E-04 lb/MMBtu	1.0E-03 tpy	6.5E-05 tpy	6.4E-05 tpy	2.6E-04 tpy	3.1E-03 tpy	4.7E-03 tpy	4.7E-03 tpy	2.3E-03 tpy	9.9E-05 tpy	6.1E-05 tpy	1.6E-06 tpy	4.3E-06 tpy	2.4E-06 tpy
<b>Total</b>			<b>1.4E-02 tpy</b>	<b>8.8E-04 tpy</b>	<b>8.7E-04 tpy</b>	<b>3.6E-03 tpy</b>	<b>4.2E-02 tpy</b>	<b>0.1 tpy</b>	<b>0.1 tpy</b>	<b>3.1E-02 tpy</b>	<b>1.3E-03 tpy</b>	<b>8.3E-04 tpy</b>	<b>2.2E-05 tpy</b>	<b>5.8E-05 tpy</b>	<b>3.2E-05 tpy</b>

**Notes:**

<sup>1</sup> Reference: AP-42, Tables 3.3-2.

<sup>2</sup> Total heat consumption based on operation as noted below:

EU ID	Rating	Limited Potential Operation		Unlimited Potential Operation		Estimated Actual Operation	
20	350 hp	7,350 MMBtu/yr @	3,000 hr/yr	21,462 MMBtu/yr @	8,760 hr/yr	693 MMBtu/yr @	283 hr/yr
21	350 hp	7,350 MMBtu/yr @	3,000 hr/yr	21,462 MMBtu/yr @	8,760 hr/yr	426 MMBtu/yr @	174 hr/yr
22	405 kW	456 MMBtu/yr @	120 hr/yr	33,303 MMBtu/yr @	8,760 hr/yr	11 MMBtu/yr @	3 hr/yr
23	400 kW	451 MMBtu/yr @	120 hr/yr	32,892 MMBtu/yr @	8,760 hr/yr	30 MMBtu/yr @	8 hr/yr
24	265 bhp	1,855 MMBtu/yr @	1,000 hr/yr	16,250 MMBtu/yr @	8,760 hr/yr	17 MMBtu/yr @	9 hr/yr

**Conversions:**

Diesel Engine Heat Rate: 7,000 Btu/hp-hr

**Table D-14. Flares - Estimated Actual and Potential HAP Emissions  
Hilcorp Alaska, LLC - Dolly Varden Platform**

CAS No.	Chemical Name	Emission Factor <sup>1</sup>	Limited/Unlimited Potential Emissions <sup>2</sup>	Estimated Actual Emissions <sup>2</sup>
			EU ID 25	EU ID 25
75070	Acetaldehyde	4.30E-02 lb/MMscf	1.2E-02 tpy	6.3E-04 tpy
107028	Acrolein	1.00E-02 lb/MMscf	2.9E-03 tpy	1.5E-04 tpy
71432	Benzene	1.59E-01 lb/MMscf	4.5E-02 tpy	2.3E-03 tpy
100414	Ethyl benzene	1.44E+00 lb/MMscf	0.4 tpy	2.1E-02 tpy
5000	Formaldehyde	1.17E+00 lb/MMscf	0.3 tpy	1.7E-02 tpy
110543	N-Hexane	2.90E-02 lb/MMscf	8.3E-03 tpy	4.2E-04 tpy
N/A	Polycyclic Organic Matter	1.40E-02 lb/MMscf	4.0E-03 tpy	2.0E-04 tpy
108883	Toluene	5.80E-02 lb/MMscf	1.7E-02 tpy	8.5E-04 tpy
106423	Xylenes (isomers and mixture)	2.90E-02 lb/MMscf	8.3E-03 tpy	4.2E-04 tpy
<b>Total</b>			<b>0.8 tpy</b>	<b>4.3E-02 tpy</b>

**Notes:**

<sup>1</sup> Reference: VCAPCD.

<sup>2</sup> Total heat consumption based on operation as noted below:

<u>EU ID</u>	<u>Rating</u>	<u>Limited/Unlimited Potential Operation</u>	<u>Estimated Actual Operation</u>
25	570 MMscf/yr	570 MMscf/yr	29.19 MMscf/yr



## Section E

### Regulatory Requirements

<b>Form E1:</b>	Stationary Source-Wide Applicable Requirements
<b>Form E3:</b>	Title V Condition Change Request
<b>Form E4:</b>	Permit Shield Request
<b>Form E5:</b>	Alternative Monitoring Procedures Form

**FORM E1**  
Stationary Source-Wide Applicable Requirements

Permit Number:     AQ0060TVP04    

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

Permit and Condition Number	Applicable Requirement Citation <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0060TVP04 – Condition 15.2	AQ0060MSS03, Condition 5	Fuel Gas H <sub>2</sub> S Limits	Other than EU IDs 13 and 26, comply with the fuel gas H <sub>2</sub> S content limit of 2,000 ppmv H <sub>2</sub> S.	Yes.	Monitor, record, and report in accordance with Conditions 15.3 and 15.4.
AQ0060TVP04 – Condition 16	Permit to Operate No. 9423-AA012 Amendment #1	Liquid Fuel Sulfur Content Limit	The maximum sulfur content of diesel or distillate fuel burned shall not exceed 0.5 wt% S <sub>fuel</sub> .	Yes.	Monitor, record, and report in accordance with Conditions 16.2 through 16.3.
AQ0060TVP04 – Condition 21.1	18 AAC 50.050(a), 50.055(a)(1)	Insignificant Emission Units – VE Standard	Do not cause or allow visible emissions to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.	Yes.	Monitor, record, and report in accordance with Condition 21.4.
AQ0060TVP04 – Condition 21.2	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 corrected to standard conditions and averaged over three hours.	Yes.	Monitor, record, and report in accordance with Condition 21.4.
AQ0060TVP04 – Condition 21.3	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 in accordance with Condition 21.4.
AQ0060TVP04 – Condition 22	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.
AQ0060TVP04 – Condition 41	40 CFR 61, Subparts A & 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 <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0060TVP04 – Condition 42	40 CFR 82, Subpart F	Subpart F – Recycling and Emissions Reduction	Comply with the applicable standards for recycling and emission reduction of refrigerants set forth in 40 CFR 82, Subpart F.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 43	40 CFR 82, Subpart G	Subpart G – Significant New Alternatives	Comply with the applicable prohibitions set out in 40 CFR 82.174.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 44	40 CFR 82, Subpart H	Subpart H – Halons Emissions Reduction	Comply with the applicable prohibitions set out in 40 CFR 82.270.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 45	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).	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 46	18 AAC 50.345(a) & (e)	Standard Terms and Conditions	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.
AQ0060TVP04 – Condition 47	18 AAC 50.345(a) & (f)	Standard Terms and Conditions	The permit may be modified, reopened, revoked and reissued, or terminated for cause.	N/A	Advisory Condition.
AQ0060TVP04 – Condition 48	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.	N/A	Advisory Condition.
AQ0060TVP04 – Condition 49	18 AAC 50.326(j)(1), 50.400, 50.403	Administration Fees	Pay to the Department all assessed permit administration fees.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 50	18 AAC 50.410, 50.420	Assessable Emissions	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.	Yes.	Annual Compliance Audit.

**FORM E1**  
Stationary Source-Wide Applicable Requirements

Permit and Condition Number	Applicable Requirement Citation <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0060TVP04 – Condition 51	18 AAC 50.410, 50.420	Assessable Emission 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.	Annual Compliance Audit.
AQ0060TVP04 – Condition 53	18 AAC 50.045(a)	Dilution	Do not dilute emissions with air to comply with this permit.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 54	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.	Record and report in accordance with Conditions 54.1 and 54.2.
AQ0060TVP04 – Condition 55	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.
AQ0060TVP04 – Condition 56	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 would unreasonably interfere with the enjoyment of life or property.	Yes.	Monitor, report, and record in accordance with Condition 56.1.
AQ0060TVP04 – Condition 57	18 AAC 50.235(a)	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.	Annual Compliance Audit.
AQ0060TVP04 – Condition 58	18 AAC 50.065	Open Burning Requirements	Do not conduct open burning at the stationary source.	Yes.	Annual Compliance Audit.

**FORM E1**  
Stationary Source-Wide Applicable Requirements

Permit and Condition Number	Applicable Requirement Citation <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0060TVP04 – Condition 59	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.
AQ0060TVP04 – Condition 60	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 emissions unit.	Yes.	Annual Compliance Audit
AQ0060TVP04 – Condition 61	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 61.1 through 61.6.
AQ0060TVP04 – Condition 62	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 emission unit type, corrected to standard conditions.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 63	18 AAC 50.345(a)	Test Exemption	It is not required to comply with Conditions 61, 62, and 63 when the exhaust is observed for visible emissions by Method 9 Plan.	N/A	Advisory Condition.
AQ0060TVP04 – Condition 64	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.
AQ0060TVP04 – Condition 65	18 AAC 50.345(a) & (m)	Test Plans	Before conducting any source tests, submit a plan to the Department.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 66	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.
AQ0060TVP04 – Condition 67	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.

**FORM E1**  
Stationary Source-Wide Applicable Requirements

Permit and Condition Number	Applicable Requirement Citation <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0060TVP04 – Condition 68	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.
AQ0060TVP04 – Condition 69	40 CFR 60.7(f), Subpart A, 40 CFR 71.6(a)(3)(ii)(B)	Recordkeeping Requirements	Keep all records required by this permit for at least five years after the date of collection.	Yes.	Keep records in accordance with Conditions 69.1 and 69.2.
AQ0060TVP04 – Condition 70	18 AAC 50.205, 50.326(j), 50.345(a) & (j), 40 CFR 71.6(a)(3)(iii)(A)	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.
AQ0060TVP04 – Condition 71	18 AAC 50.326(j)(3), 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.
AQ0060TVP04 – Condition 72	18 AAC 50.345(i), 50.200, 40 CFR 71.5(a)(2), 71.6(a)(3)	Information Requests	Furnish to the Department 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.
AQ0060TVP04 – Condition 73	18 AAC 50.235(a)(2), 50.240(c), 50.346(b)(2) & (3)	Excess Emissions and Permit Deviation Reports	Report all emissions or operations that exceed or deviate from the requirements of this permit.	Yes.	Report in accordance with Conditions 73.1 through 73.3.
AQ0060TVP04 – Condition 74	18 AAC 50.346(b)(6), 40 CFR 71.6(a)(3)(iii)(A)	Operating Reports	Submit to the Department an original and one copy of 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 74.1 through 74.4.

**FORM E1**  
Stationary Source-Wide Applicable Requirements

Permit and Condition Number	Applicable Requirement Citation <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0060TVP04 – Condition 75	40 CFR 71.6(c)(5)	Annual Compliance Certification	Each year by March 31, the Permittee shall compile and submit to the Department an annual compliance certification report.	Yes.	Report in accordance with Conditions 75.1 through 75.3.
AQ0060TVP04 – Condition 76	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, by emission unit, of CO, NH <sub>3</sub> , NO <sub>x</sub> , PM <sub>10</sub> , PM <sub>2.5</sub> , SO <sub>2</sub> , VOCs, and Lead (Pb) (and lead compounds) for the previous calendar year.	Yes.	Report in accordance with Conditions 76.1 through 76.4.
AQ0060TVP04 – Condition 77	40 CFR 60.13, 63.10(d) & (f), 71.6(c)(6)	NSPS and NESHAP Reports	<b>Reports:</b> Attach to the operating report for the period covered by the report, a copy of any NSPS and NESHAP reports submitted to the EPA; and <b>Waivers:</b> Keep a copy of each EPA-issued monitoring waiver or custom monitoring schedule.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Condition 78	40 CFR 71.10(d)(1)	Permit Applications and Submittals	Comply with the requirements for submitting application information to the EPA Region 10.	Yes.	Comply with Conditions 78.1 through 78.4.
AQ0060TVP04 – Condition 79	40 CFR 71.6(a)(8)	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.	N/A	Advisory Condition.
AQ0060TVP04 – Condition 80	40 CFR 71.6(a)(12)	Off Permit Changes	Changes may be made that are not addressed or prohibited by this permit.	Yes.	Comply with the requirements of Conditions 80.1 through 80.4.
AQ0060TVP04 – Condition 81	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.	Comply with the requirements of Conditions 81.1 through 81.3.

**FORM E1**  
Stationary Source-Wide Applicable Requirements

Permit and Condition Number	Applicable Requirement Citation <sup>1</sup>	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0060TVP04 – Condition 82	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 an application no sooner than October 29, 2023 and no later than October 29, 2024.	Yes.	Annual Compliance Audit.
AQ0060TVP04 – Conditions 83 through 88	18 AAC 50.345(a) through (d)	General compliance requirements	Comply with each permit term and condition.	N/A	Advisory Condition.
AQ0060TVP04 – Condition 88	18 AAC 50.345(h)	General compliance requirements	Allow the Department access to the facility.	Yes.	Annual Compliance Audit.

<sup>1</sup> 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:   AQ0060TVP04  

**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
AQ0060TVP04 – Throughout	Revise/Remove	As listed in Form B, EU ID 10 is no longer dual-fuel fired and only fires fuel gas as fuel.	Revise the permit throughout to reflect this change. Including: <ul style="list-style-type: none"> <li>• Remove “/Diesel” from the Emissions Unit Description for EU ID 10 in Section 2, Table A.</li> <li>• Remove Condition 1.2 and incorporate EU ID 10 into Condition 1.1.</li> <li>• Remove Condition 6.2 and incorporate EU ID 10 into Condition 6.1.</li> <li>• Remove EU ID 10 from the sub-heading above, and listed in, Condition 7, and from Condition 7.1.</li> <li>• Remove Condition 13 and sub-conditions.</li> <li>• Remove “EU ID 10 (when burning diesel)” from the sub-heading above, and listed in, Condition 14.1.</li> <li>• Remove “(when burning fuel gas)” in the sub-heading above Condition 14.3.</li> </ul>
AQ0060TVP04 – Throughout	Revise/Remove	As listed in Form B, EU IDs 1, 2, and 8 have been physically removed from Dolly Varden Platform.	Revise the permit throughout to reflect this change. Including: <ul style="list-style-type: none"> <li>• Remove rows for EU IDs 1, 2, and 8 from Table A - Emissions Unit Inventory in Section 2.</li> <li>• Remove EU IDs 1, 2, and 8 from Conditions 1 and 1.1.</li> <li>• Remove EU IDs 1, 2, and 8 from Conditions 6 and 6.1.</li> <li>• Remove EU IDs 1, 2, and 8 from Condition 14.</li> <li>• Remove EU IDs 1, 2, and 8 from the subtitle over Condition 14.3.</li> <li>• Remove EU IDs 1, 2, and 8 from Condition 52.</li> </ul>

**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
AQ0060TVP04 – Throughout	Revise/Remove	As listed in Form B, the Kuukpik V Rig is no longer authorized to operate at Dolly Varden Platform per a pending minor permit revision.	Revise the permit throughout to reflect this change. Including: <ul style="list-style-type: none"> <li>• Remove Table B in Section 2.</li> <li>• Remove “and EU IDs K6 and K7 listed in Table B” for Condition 1.</li> <li>• Remove Conditions 1.6, 3.1.a(vi) and 4.1.a(iii).</li> <li>• Remove “and EU IDs K6 and K7 listed in Table B” for Condition 6.</li> <li>• Remove Condition 6.6.</li> <li>• Remove Condition 10, sub-heading, and sub-conditions.</li> <li>• Remove “and EU IDs K6 and K7 listed in Table B” for Condition 14.</li> <li>• Remove “K6 and K7” from the sub-heading above Condition 14.1.</li> <li>• Remove Condition 14.2.</li> <li>• Remove Condition 17 and sub-conditions.</li> <li>• Remove Condition 18 and sub-conditions.</li> <li>• Remove “EU IDs K1 through K7” from Condition 52.</li> </ul>
AQ0060TVP04 – 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.
AQ0060TVP04 – Section 1, Identification	Revise	The Stationary Source Name has an extra-large font for “Platform”.	Revise the Stationary Source Name: Dolly Varden Platform to match the font size of the rest of the table.
AQ0060TVP04 – Section 1, Identification	Revise	The Permittee’s Responsible Official has been 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 Bradley Simpson, Asset Team Lead

**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
AQ0060TVP04 – Section 1, Identification	Revise	The Stationary Source and Building Contact and Permit Contact have been changed.	Revise the Stationary Source and Building Contact and Permit Contact to:  Drew Anderson, P.E., Environmental Engineer 3800 Centerpoint Drive, Suite 1400 Anchorage, AK, 99503 (907) 777-8488 ananderson@hilcorp.com
AQ0060TVP04 – Section 1, Identification	Revise	The Fee Contact address has been changed.	Revise the Fee Contact address to:  3800 Centerpoint Drive, Suite 1400 Anchorage, AK, 99503
AQ0060TVP04 – Section 2, Table A Footnote	Revise	Revise the footnote to streamline and remove unnecessary details that can be found in the Statement of Basis (SOB).	Revise the footnotes as follows:  “1. EU ID 26 was constructed in 2003 and was installed at the stationary source in 2015. <del>Therefore, EU ID 26 is subject to NSPS Subpart GG and not Subpart KKKK.</del> ”
AQ0060TVP04 – Sub-heading above Condition 14.3	Revise	The list of EU IDs in the sub-heading above Condition 14.3 is missing EU ID 25, the flare.	Add EU ID 25 to the list of EU IDs in the sub-heading above Condition 14.3.
AQ0060TVP04 – Condition 24.2	Revise	Correct the emissions units listed in the condition.	Revise the condition as follows to correct the emissions units referenced:  “Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of EU IDs <u>12, 13, and 26</u> <del>through 5 and 15</del> ; the nature and cause of any malfunction (if known), and the corrective action taken or preventative measures adopted.”
AQ0060TVP04 – Condition 34.3	Remove	Streamline the permit by removing gap-fill language in Condition 34.3. Keeping records is a standard requirement per Condition 69. Duplicating this condition is unnecessary.	Streamline the permit by removing Condition 34.3.

**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
AQ0060TVP04 – Conditions 36 through 40	Revise	NESHAP Subpart ZZZZ was updated August 30, 2024, and these changes should be reflected in the permit.	Revise the language in Conditions 36 through 40 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.
AQ0060TVP04 – Condition 40.2	Remove	Streamline the permit by removing duplicative gap-fill language. Deviations are reported by Condition 74 and included in the Operating Report per Condition 40.1.	Remove the condition in its entirety.
AQ0060TVP04 – Condition 76	Revise	Update to remove redundancy.	Update as follows:  “The Permittee shall submit to the Department reports of actual emissions for the previous calendar year, by emissions unit, of CO, NH3, NOx, PM10, PM2.5, SO2, VOCs and Lead (Pb) (and lead compounds) <del>for the previous calendar year</del> using the form in Section 14 of this permit, as follows:”
AQ0060TVP04 – Condition 77.2	Revise	Correct the typo.	Correct the typo in the condition as follows:  “77.2. <u>Waivers:</u> <del>78</del> The Permittee shall keep a copy...”

**FORM E4**  
Permit Shield Request

Permit Number:     AQ0060TVP04    

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

Non-Applicable Requirements <sup>1</sup>	Reason for non-applicability and citation/basis
40 CFR 60 Subparts D, Db, E, CCCC, DDDD, EEEE, FFFF	No affected EUs within the permitted stationary source.
40 CFR 60 Subpart Dc	The heat input capacity of the insignificant boilers and heaters are each less than 10 MMBtu/hr.
40 CFR 60 Subparts K and Ka	No affected EUs within the permitted stationary source. Per 40 CFR 60.110(a) and 60.110a(a), affected facilities are petroleum liquids storage tanks with a capacity greater than 40,000 gallons. Per 40 CFR 60.111(b) and 60.111a(b), petroleum liquids do not include diesel fuel. The Dolly Varden Platform tanks are either less than 40,000 gallons or storing diesel fuel.
40 CFR 60 Subpart Kb	No affected EUs within the permitted stationary source. Per 40 CFR 60.110b, affected facilities are volatile organic liquid storage tanks with a capacity greater than or equal to 75 cubic meters (19,800 gallons) which were constructed, reconstructed, or modified after July 23, 1984. The Dolly Varden Platform tanks are either less than 19,800 gallons or commenced construction prior to July 23, 1984 and not modified or reconstructed thereafter.
40 CFR 63 Subpart HHH	This stationary source is not a “major source” of HAPs as defined in 40 CFR 63.1271.
40 CFR 60 Subparts OOOO, OOOOa and OOOOb	NSPS Subparts OOOO, OOOOa, and OOOOb apply only to onshore affected facilities. Dolly Varden Platform is on the outer continental shelf, so it is not an onshore facility as defined in 40 CFR 60.5430, 60.5430a, and 60.5430b.
40 CFR 63 Subpart JJJJJ	No affected EUs within the permitted stationary source. The insignificant boilers are gas-fired, and the heaters are not boilers per the definition in 40 CFR 63.11237.
18 AAC 50.055(b)(3), PM emissions standard for industrial process in operation before July 1, 1972	No affected EUs within the permitted stationary source.

<sup>1</sup> Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 CFR 60.332(a)(2).]

**FORM E5**  
Alternative Monitoring Procedures (AMP) Form

Permit Number:     AQ0060TVP04    

**Stationary Source-Wide Alternative Monitoring Procedures and/or EPA Waivers (*attach additional sheets as needed*):**

Condition for which AMP or EPA waiver is applicable	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0060TVP04 – Condition 34.1d(ii)	NSPS Subpart GG Sulfur Standard, 40 CFR 60.334(h), 60.334(i)(3)	Custom Fuel Monitoring Schedule for EU IDs 12, 13, and 26: Monitor semi-annually for fuel gas with an H <sub>2</sub> S concentration less than 2,000 ppmw. There is no fuel-bound nitrogen and fuel gas nitrogen monitoring is waived.	Yes.	Fuel gas H <sub>2</sub> S monitoring shall be performed semi-annually. Length-of-stain tube test covered by ASTM Methods D 4810-88 and D 4913-89, or Gas Producer’s Association Method 2377-86 can be used to determine H <sub>2</sub> S concentration in gas combusted. Record the fuel source and fuel quality and report any change in the fuel source or quality.

<sup>1</sup> 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. AQ0060TVP04

Minor Permit No. AQ0060MSS03

**DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
**AIR QUALITY OPERATING PERMIT**

Permit No. AQ0060TVP04

Issue Date: April 29, 2020

Expiration Date: April 29, 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 **Dolly Varden Platform**.

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

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

All currently applicable stationary source-specific terms and conditions of Air Quality Control Permit to Operate No. 9423-AA012 and Minor Permit Nos. AQ1411MSS01 and AQ0060MSS03, have been incorporated into this operating permit.

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

Upon effective date of this permit, Operating Permit AQ0060TVP03 Revision 2 expires.

This operating permit becomes effective May 29, 2020.



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James R. Plosay, Manager  
Air Permits Program

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**List of Abbreviations Used in this Permit**

AAC.....Alaska Administrative Code	Pollutants [NESHAPs as contained in 40 C.F.R. 61 and 63]
ADEC .....Alaska Department of Environmental Conservation	NG.....Natural Gas
AS .....Alaska Statutes	NH <sub>3</sub> .....ammonia
ASTM.....American Society for Testing and Materials	NO <sub>x</sub> .....Nitrogen Oxides
BACT .....Best Available Control Technology	NSPS.....Federal New Source Performance Standards [NSPS as contained in 40 C.F.R. 60]
bHp.....Brake Horsepower	O & M.....Operation and Maintenance
C.F.R. ....Code of Federal Regulations	O <sub>2</sub> .....Oxygen
CAA or The Act..Clean Air Act	PAL.....Plantwide Applicability Limitation
CO.....Carbon Monoxide	Pb .....lead
CO <sub>2e</sub> .....CO <sub>2</sub> -equivalent	PM .....Particulate Matter
Department .....Alaska Department of Environmental Conservation	PM <sub>10</sub> .....Particulate matter less than or equal to a nominal 10 microns in diameter
dscf .....Dry standard cubic foot	PM <sub>2.5</sub> .....Particulate matter less than or equal to a nominal 2.5 microns in diameter
EPA.....US Environmental Protection Agency	ppm .....Parts per million
EU.....Emissions unit	ppmv, ppmvd .....Parts per million by volume on a dry basis
gr./dscf .....grain per dry standard cubic foot (1 pound = 7000 grains)	psia .....Pounds per Square Inch (absolute)
GAPCP.....Good Air Pollution Control Practices	PSD.....Prevention of Significant Deterioration
GHG .....Greenhouse Gas	PTE.....Potential to Emit
GPH .....gallons per hour	RICE .....Reciprocating Internal Combustion Engine
H <sub>2</sub> S .....hydrogen sulfide	SIC.....Standard Industrial Classification
HAPs .....Hazardous Air Pollutants [HAPs as defined in AS 46.14.990]	SIP .....State Implementation Plan
Hp .....Horsepower	SPC .....Standard Permit Condition or Standard Operating Permit Condition
ID.....Emissions unit Identification Number	SO <sub>2</sub> .....Sulfur dioxide
kW .....kiloWatts	TBD.....to be determined
LAER .....Lowest Achievable Emission Rate	TPH .....Tons per hour
MACT.....Maximum Achievable Control Technology [as defined in 40 C.F.R. 63]	TPY.....Tons per year
MMBtu/hr.....Million British thermal units per hour	VOC.....volatile organic compound [VOC as defined in 40 C.F.R. 51.100(s)]
MMscf .....Million standard cubic feet	VOL.....volatile organic liquid [VOL as defined in 40 C.F.R. 60.111b, Subpart Kb]
MR&R .....Monitoring, Recordkeeping, and Reporting	vol% .....volume percent
NA.....Not applicable	wt% .....weight percent
NAICS.....North American Industrial Classification System	wt% <sub>Sfuel</sub> .....weight percent of sulfur in fuel
NESHAPs .....Federal National Emission Standards for Hazardous Air	

**Section 1. Stationary Source Information**

**Identification**

Permittee:	<b>Hilcorp Alaska, LLC</b> 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503	
Stationary Source Name:	<b>Dolly Varden Platform</b>	
Location:	60° 48' 23.3" North; 151° 37' 57.7" West	
Physical Address:	Upper Cook Inlet, AK	
Owner/Operator	<b>Hilcorp Alaska, LLC</b> 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503	
Permittee's Responsible Officials:	David S. Wilkins, Senior Vice President Vanessa Hughes, Kenai Asset Team Leader John Barnes, North Slope Senior Asset Team Leader Matt Brown, Cook Inlet Offshore Asset Team Leader 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503	
Designated Agent:	CT Corporation System 9360 Glacier Highway, Suite 202 Juneau, AK 99801	
Stationary Source and Building Contact:	David S. Wilkins, Senior Vice President 3800 Centerpoint Drive, Suite 1400 Anchorage, AK 99503 (907) 777-8300 dwilkins@hilcorp.com	
Permit Contact:	Julieanna Potter, Environmental Specialist 3800 Centerpoint Drive, 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 C.F.R. 71.5(c)(1) & (2)]

## Section 2. Emissions Unit Inventory and Description

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

Table A - Emissions Unit Inventory

EU ID	Tag No.	Emissions Unit Name	Emissions Unit Description	Rating/ Size	Installation Date
1	V-PM-481A	Solar Saturn T-1200 Turbine	Solar Pump Drive #1 Fuel Gas	1,200 Hp	1969
2	V-PM-482A	Solar Saturn T-1200 Turbine	Solar Pump Drive #2 Fuel Gas	1,200 Hp	1969
5	V-PM-485A	Solar Saturn T-1200 Turbine	Solar Pump Drive #5 Fuel Gas	1,200 Hp	1969
6	V-PM-486A	Solar Saturn T-1200 Turbine	Solar Pump Drive #6 Fuel Gas	1,200 Hp	1969
7	V-PM-487A	Solar Saturn T-1200 Turbine	Solar Pump Drive #7 Fuel Gas	1,200 Hp	1968
8	V-PM-0021	Solar Saturn T-1200 Turbine	AC #1 Generator Drive Fuel Gas	1,200 Hp	1969
9	V-PM-0022	Solar Saturn T-1200 Turbine	AC #2 Generator Drive Fuel Gas	1,200 Hp	1970
10	V-PM-0023	Solar Saturn T-1200 Turbine	AC #3 Generator Drive Fuel Gas/Diesel	1,200 Hp	1970
12	V-PM-003A	Solar Centaur T-4500 Turbine	Compressor Drive Fuel Gas	4,500 Hp	1985
13	V-PM-6370	Solar Centaur T-5900 Turbine	AC #6 ESP Generator Fuel Gas	4,270 kW	2002
16	V-B-0001	Bryan Boiler	Glycol Boiler #1 Fuel Gas	8.5 MMBtu/hr	2006
17	V-B-0002	Bryan Boiler	Glycol Boiler #2 Fuel Gas	8.5 MMBtu/hr	2006
20	V-PM-0122	Detroit Diesel 8V71 Engine (NE)	East Skagit Crane Diesel	350 Hp	1989
21	V-PM-0121	Detroit Diesel 8V71 Engine (SW)	West Skagit Crane Diesel	350 Hp	1989
22	V-PM-0494	Detroit Diesel Engine	Fire Pump Drive P-3 Diesel	405 kW	1994
23	V-PM-0031	Detroit Diesel Engine	Detroit Backup Generator Diesel	400 kW	1994
24	V-PM-6380	Caterpillar 3306B Engine	Air Compressor Driver Diesel	265 bHp	2003
25	V-SP-SF/HP/LP	Flare (SF/HP/LP) and Pilot	Safety/Operating Flares Fuel Gas	570 MMscf/yr	1995
26	SN 0801	Solar Centaur 50 Turbine	AC #7 SoLoNOx Turbine Fuel Gas	5.65 MW	2015 <sup>1</sup>

Notes:

1. EU ID 26 was constructed in 2003 and was installed at the stationary source in 2015. Therefore, EU ID 26 is subject to NSPS Subpart GG and not Subpart KKKK.

**Table B – Kuukpik V Rig Emissions Unit Inventory<sup>1,2</sup>**

<b>EU ID</b>	<b>Emissions Unit Name</b>	<b>Emissions Unit Description</b>	<b>Fuel Type</b>	<b>Rating/ Size</b>	<b>Installation Date</b>
K1	Hydraulic Power Unit	Detroit Diesel/ Series DDEC IV Engine	Diesel	850 Hp	TBD
K2	Hydraulic Power Unit	Detroit Diesel/ Series DDEC IV Engine	Diesel	850 Hp	TBD
K3	Light Plant Generator	Detroit Diesel/ Series 60 Engine	Diesel	600 Hp	TBD
K4	Light Plant Generator	Detroit Diesel/ Series 60 Engine	Diesel	600 Hp	TBD
K5	Portable Hydraulic Gen.	Engine (make/model unknown)	Diesel	101 Hp	TBD
K6	Boiler	Volcano Boiler	Diesel	3.6 MMBtu/hr	TBD
K7	Boiler	Volcano Boiler	Diesel	3.6 MMBtu/hr	TBD

Notes:

1. EU IDs K1 through K7 are portable and operated on a periodic and temporary basis.
2. EU IDs K1 through K5 are nonroad engines and rotate on and off the platform.

[40 C.F.R. 71.5(c)(3)]  
[Minor Permit AQ1411MSS01 Table 1, 7/9/2015]

### **Section 3. State Requirements**

#### **Visible Emissions Standards**

- 1. Industrial Process and Fuel-Burning Equipment Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from EU IDs 1, 2, 5 through 10, 12, 13, 16, 17, and 20 through 26 listed in Table A and EU IDs K6 and K7 listed in Table B to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.

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

[40 C.F.R. 71.6(a)(1), (a)(3), & (c)(6)]

- 1.1. For EU IDs 1, 2, 5 through 9, 12, 13, 16, 17, and 26, burn only gas as fuel. Monitoring for these emissions units shall consist of a statement in each operating report under Condition 74 indicating whether each of these emissions units burned only gas during the period covered by the report. Report under Condition 73 if any fuel other than gas is burned.
- 1.2. For EU ID 10, burn only gas as the primary fuel. Monitoring for this emissions unit shall consist of a statement in each operating report required under Condition 74 indicating whether this emissions unit burned gas as the primary fuel during the period covered by the report. If EU ID 10 operated on a back-up liquid fuel during the period covered by the report, the Permittee shall monitor, record, and report in accordance with Condition 13.
- 1.3. For each of EU IDs 20, 21, and 24, as long as the emissions unit does not exceed the significant emissions thresholds listed in 18 AAC 50.326(e),<sup>1</sup> monitoring shall consist of an annual compliance certification under Condition 75 for the visible emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 74 if any of EU IDs 20, 21, and 24 exceeds the significant emissions thresholds listed in 18 AAC 50.326(e) and monitor, record, and report in accordance with Conditions 2 through 4 for the remainder of the permit term for that emissions unit.
- 1.4. For each of EU IDs 22 and 23, as long as the emissions unit does not exceed the hour limits in Condition 19.2, monitoring shall consist of an annual compliance certification under Condition 75 for the visible emissions standard based on reasonable inquiry. Otherwise, monitor, record, and report in accordance with Conditions 2 through 4 for the remainder of the permit term for that emissions unit.
- 1.5. For the flare, EU ID 25, monitor, record and report in accordance with Condition 5.
- 1.6. For each of EU IDs K6 and K7, the Permittee shall monitor, record, and report as follows:

[Condition 3.1 – 3.3, Minor Permit AQ1411MSS01, 7/9/2015]

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<sup>1</sup> Operational hours corresponding to 2 tpy NO<sub>x</sub> (worst-case significant emissions threshold listed in 18 AAC 50.326(e)) based on the emission factors used to calculate Potential to Emit (PTE) for EU IDs 20, 21, and 24 operating at full load are 368 hours, 368 hours, and 486 hours, respectively, per rolling 12-month period.

- a. Within two days of initial startup after each relocation to the Dolly Varden Platform, the Permittee shall observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations.
- b. Record and report in accordance with Conditions 3 and 4.

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

#### *Liquid Fuel-Fired Emissions Units, EU IDs 20 through 24*

2. **Visible Emissions Monitoring.** When required by Condition 1.3 or 1.4, the Permittee shall observe the exhaust of each of EU IDs 20 through 24 for visible emissions using the Method 9 Plan under Condition 2.2.

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

- 2.1. The Permittee may for each unit elect to continue the visible emissions monitoring schedule in effect from the previous permit at the time a renewed permit is issued, if applicable.
- 2.2. **Method 9 Plan.** For all observations in this plan, observe exhaust, following 40 C.F.R. 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations.<sup>2</sup>
  - a. First Method 9 Observation. Except as provided in Condition 2.1, observe exhausts of EU IDs 20 through 24 according to the following criteria:
    - (i) Except as provided in Conditions 2.2.a(ii) through 2.2.a(iv), for any of EU IDs 20 through 24, observe exhaust within six months after the issue date of this permit.
    - (ii) In the event of replacement<sup>3</sup> of any of EU IDs 20 through 24 during the term of this permit, observe exhaust within 30 days of startup of the newly installed emissions units.
    - (iii) For EU IDs 20 through 24, observe the exhaust of the emissions unit within 30 days after the end of the calendar month during which any of the significant emissions thresholds in 18 AAC 50.326(e) was exceeded.
    - (iv) For any of EU IDs 20 through 24 with intermittent operations, within 30 days of the unit's next scheduled operation.
  - b. Monthly Method 9 Observations. After the first Method 9 observation conducted under Condition 2.2.a, perform 18-minute observations at least once in each calendar month that an emissions unit operates; or for an emissions unit with intermittent operations, at least once in each calendar month that the emissions unit is scheduled to operate.

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<sup>2</sup> Visible emissions observations are not required during emergency operations.

<sup>3</sup> "Replacement," as defined in 40 C.F.R. 51.166(b)(32).

- c. Semiannual Method 9 Observations. After observing emissions for three consecutive operating months under Condition 2.2.b, unless a six-consecutive-minute average opacity is greater than 15 percent and one or more observations are greater than 20 percent, perform observations
  - (i) within six months after the preceding observation, or
  - (ii) for an emissions unit with intermittent operations, during the next scheduled operation immediately following six months after the preceding observation.
- d. Annual Method 9 Observations. After at least two semiannual observations under Condition 2.2.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 observations
  - (i) within twelve months after the preceding observation; or
  - (ii) for an emissions unit with intermittent operations, during the next scheduled operation immediately following twelve 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 observations are greater than 20 percent, then increase or maintain the observation frequency for that emissions unit to at least monthly intervals as described in Condition 2.2.b, and continue monitoring in accordance with the Method 9 Plan.

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

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

3.1. For all Method 9 observations under Conditions 1.6 and 2.2,

- a. the observer shall record the following:
  - (i) the name of the stationary source, emissions unit and location, emissions unit type, observer's name and affiliation, and the date on the Visible Emissions Observation Form in Section 11;
  - (ii) the time, estimated distance to the emissions location, sun location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), plume background, and operating mode (load or fuel consumption rate or best estimate, if unknown) on the sheet at the time opacity observations are initiated and completed;
  - (iii) the presence or absence of an attached or detached plume and the approximate distance from the emissions outlet to the point in the plume at which the observations are made;

- (iv) opacity observations to the nearest five percent at 15-second intervals on the Visible Emissions Observation Form in Section 11;
  - (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; and
  - (vi) the date and time of initial startup of EU IDs K6 and K7 after each relocation to the Dolly Varden Platform.
- b. To determine the six-consecutive-minute average opacity,
- (i) divide the observations recorded on the record sheet into sets of 24 consecutive observations;
  - (ii) sets need not be consecutive in time and in no case shall two sets overlap;
  - (iii) for each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24; and
  - (iv) record the average opacity on the sheet.
- c. Calculate and record the highest six-consecutive- and 18-consecutive-minute average opacities observed.

3.2. The records may be kept in electronic format.

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

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

- 4.1. Include in each operating report under Condition 74 for the period covered by the report:
- a. for all Method 9 observations under Conditions 1.6 and 2.2:
    - (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;
      - (C) dates when one or more observed six-consecutive-minute averages were greater than 20 percent; and
    - (iii) for EU IDs K6 and K7, the dates and times recorded under Condition 3.1.a(vi); and

- b. a summary of any monitoring or recordkeeping required under Conditions 1.6, 2 and 3 that was not done;
- 4.2. Report under Condition 73:
- a. the results of Method 9 observations that exceed an average of 20 percent opacity for any six-consecutive-minute period; and
  - b. if any monitoring under Conditions 1.6 and 2 was not performed when required, report within three days of the date the monitoring was required.

*Flares, EU ID 25*

- 5. Visible Emissions MR&R.** For EU ID 25, the Permittee shall observe one daylight flare event<sup>4</sup> within 12 months of the preceding flare event observation. If no event exceeds 1 hour within that 12-month period, then the Permittee shall observe the next daylight flare event.

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

- 5.1. Monitor flare events using Method 9.
- 5.2. Record the following information for observed events:
  - a. the flare(s) EU ID number;
  - b. results of the Method 9 observations;
  - c. reason(s) for flaring;
  - d. date, beginning and ending time of event; and
  - e. volume of gas flared.
- 5.3. The records required by Condition 5.2 may be kept in electronic format.
- 5.4. Monitoring of a flare event may be postponed for safety or weather reasons, or because a qualified observer is not available. If monitoring of a flare event is postponed for any of the reasons described in this condition, the Permittee shall include in the next operating report required by Condition 74 an explanation of the reason the event was not monitored.
- 5.5. Attach copies of the records required by Condition 5.2 with the operating report required by Condition 74 for the period covered by that report.
- 5.6. Report under Condition 73 whenever the opacity standard in Condition 1 is exceeded.

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<sup>4</sup> For purposes of this permit, a “flare event” is flaring of gas 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.

## Particulate Matter (PM) Emissions Standards

- 6. Industrial Process and Fuel-Burning Equipment PM Emissions.** The Permittee shall not cause or allow particulate matter emitted from EU IDs 1, 2, 5 through 10, 12, 13, 16, 17, and 20 through 26 listed in Table A and EU IDs K6 and K7 listed in Table B to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.

[18 AAC 50.040(j)(4), 50.055(b)(1), 50.326(j)(3) & (4), and 50.346(c)]  
[40 C.F.R. 71.6(a)(1), (a)(3) & (c)(6)]

- 6.1. For EU IDs 1, 2, 5 through 9, 12, 13, 16, 17, and 26, comply with Condition 1.1.
- 6.2. For EU ID 10, the Permittee shall monitor, record and report according to Condition 1.2.
- 6.3. For each of EU IDs 20, 21, and 24, as long as the emissions unit does not exceed the significant emissions thresholds listed in 18 AAC 50.326(e),<sup>5</sup> monitoring shall consist of an annual compliance certification under Condition 75 for the PM emissions standard based on reasonable inquiry. The Permittee shall report in the operating report under Condition 74 if any of EU IDs 20, 21, and 24 exceeds the significant emissions thresholds listed in 18 AAC 50.326(e) and monitor, record, and report in accordance with Conditions 7 through 9 for the remainder of the permit term for that emissions unit.
- 6.4. For each of EU IDs 22 and 23, as long as the emissions unit does not exceed the hour limits in Condition 19.2, monitoring shall consist of an annual compliance certification under Condition 75 for the PM emissions standard based on reasonable inquiry. Otherwise, monitor, record, and report in accordance with Conditions 7 through 9 for the remainder of the permit term for that emissions unit.
- 6.5. For the flare, EU ID 25, monitor, record and report in accordance with Condition 5.
- 6.6. For each of EU IDs K6 and K7, the Permittee shall monitor, record, and report in accordance with Conditions 10 through 12.

## PM MR&R

### *Liquid Fuel-Burning Engines and Turbines, EU IDs 10, and 20 through 24*

- 7. Particulate Matter Monitoring.** The Permittee shall conduct source tests on the diesel engines, EU IDs 20 through 24 (when required by Condition 6.3 or 6.4), and on the diesel-fired turbine EU ID 10 (when required by Condition 13.3.a), to determine the concentration of PM in the exhaust of each of the emissions units as follows:

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

<sup>5</sup> Operational hours corresponding to 2 tpy NO<sub>x</sub> (worst-case significant emissions threshold listed in 18 AAC 50.326(e)) based on the emission factors used to calculate Potential to Emit (PTE) for EU IDs 20, 21, and 24 operating at full load are 368 hours, 368 hours, and 486 hours, respectively, per rolling 12-month period.

- 7.1. If the result of any Method 9 observation conducted under Condition 2.2 for any of EU IDs 20 through 24 is greater than the criteria of Conditions 7.2.a or 7.2.b, or if the Method 9 observation conducted under Condition 13.3 for EU ID 10 exceeds the standard in Condition 1, the Permittee shall, within six months of that Method 9 observation, either:
- a. make repairs and observe the emissions unit exhaust under load conditions comparable to those when the criteria were exceeded, following 40 C.F.R. 60, Appendix A-4 Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations, to show that emissions are no longer greater than the criteria of Condition 7.2; or
  - b. except as exempted under Condition 7.4, conduct a PM source test according to requirements set out in Section 6.
- 7.2. Conduct the PM source test or make repairs according to Condition 7.1, if any Method 9 observation under Condition 2.2 results in an 18-minute average opacity greater than
- a. 20 percent for an emissions unit with an exhaust stack diameter that is equal to or greater than 18 inches; or
  - b. 15 percent for an emissions unit with an exhaust stack diameter that is less than 18 inches, unless the Department has waived this requirement in writing.
- 7.3. During each one-hour PM source test run under Condition 7.1.b, observe the emissions unit exhaust for 60 minutes in accordance with Method 9 and calculate the highest 18-consecutive-minute average opacity measured during each one-hour test run. Submit a copy of these observations with the source test report.
- 7.4. The PM source test requirements in Condition 7.1.b are waived for an emissions unit if a source test on that unit has shown compliance with the PM standard during this permit term.
- 8. PM Recordkeeping.** The Permittee shall keep records of the results of any PM source test and visible emissions observations conducted under Condition 7.  
[18 AAC 50.040(j)(4), 50.326(j)(3) & (4), and 50.346(c)]  
[40 C.F.R. 71.6(a)(3)(ii) & (c)(6)]
- 9. Particulate Matter Reporting.** The Permittee shall report as follows:  
[18 AAC 50.040(j)(4), 50.326(j)(3) & (4), and 50.346(c)]  
[40 C.F.R. 71.6(a)(3)(iii) & (c)(6)]
- 9.1. Report under Condition 73
- a. the results of any PM source test that exceed the PM emissions limit; or
  - b. if the requirements under Condition 7.1 were triggered and the Permittee did not comply on time with either Condition 7.1.a or 7.1.b. Report the deviation within 24 hours of the date compliance with Condition 7.1 was required.

- 9.2. Notify the Department of any Method 9 observation results that are greater than the threshold of either Condition 7.2.a or 7.2.b within 30 days of the end of the month in which the observations occurred. Include the dates, EU ID(s), and results when an observed 18-minute average opacity was greater than an applicable threshold in Condition 7.2.
- 9.3. In each operating report under Condition 74, include for the period covered by the report:
  - a. a summary of the results of any PM testing and visible emissions observations under Condition 7; and
  - b. copies of any visible emissions observation results (opacity observations) greater than the thresholds of Condition 7.2, if they were not already submitted.

*Liquid Fuel-Burning Boilers and Heaters, EU IDs K6 and K7*

- 10. PM Monitoring.** The Permittee shall demonstrate compliance with Condition 6 by conducting PM source tests on any of EU IDs K6 and K7, as follows:

[Condition 4.1(a) & (b), Minor Permit AQ1411MSS01, 7/9/2015]  
[18 AAC 50.040(j)(4), 50.326(j)(3) & (4), and 50.346(c)]  
[40 C.F.R. 71.6(a)(3)(i) & (c)(6)]

- 10.1. Except as exempted under Condition 10.3, conduct a PM source test according to the requirements in Section 6 no later than 90 calendar days after the Method 9 visible emissions observations conducted under Condition 1.6 showed an exceedance of the limit in Condition 1.
- 10.2. During each one-hour PM source test run under Condition 10.1, observe the emissions unit exhaust for 60 minutes in accordance with Method 9 and calculate the average opacity measured during each one-hour test run. Submit a copy of these observations with the source test report.
- 10.3. The PM source test requirement in Condition 10.1 is waived for an emissions unit if
  - a. a source test on that unit has shown compliance with the PM standard during this permit term, or
  - b. corrective action was taken to reduce visible emissions and an 18-minute visible emissions observation is conducted within 30 days to show that the excess visible emissions described in Condition 10.1 no longer occur.

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

[Condition 4.1(c), Minor Permit AQ1411MSS01, 7/9/2015]  
[18 AAC 50.040(j)(4), 50.326(j)(3) & (4), and 50.346(c)]  
[40 C.F.R. 71.6(a)(3)(ii) & (c)(6)]

- 12. PM Reporting.** The Permittee shall report as follows:

[Condition 4.1(d) & (e), Minor Permit AQ1411MSS01, 7/9/2015]  
[18 AAC 50.040(j)(4), 50.326(j)(3) & (4), and 50.346(c)]

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

- 12.1. In each operating report required by Condition 74, include for the period covered by the report a summary of the results of any source test and visible emissions observations conducted under Condition 10.
- 12.2. Report in accordance with Condition 73 any time the results of a source test exceed the PM emission standard in Condition 6.

### **VE & PM MR&R for Dual Fuel-Fired Emissions Unit, EU ID 10**

13. The Permittee shall monitor, record and report the monthly hours of operation of EU ID 10 when operating on a back-up liquid fuel.

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

- 13.1. If EU ID 10 does not exceed 400 hours of operations per calendar year on a back-up liquid fuel, monitoring of compliance for visible emissions and PM shall consist of an annual compliance certification under Condition 75.
- 13.2. For EU ID 10, notify the Department and begin monitoring the affected emissions unit in accordance with Condition 13.3 no later than 15 days after the end of a calendar month in which the cumulative hours of operation for the calendar year exceed any multiple of 400 hours on a back-up liquid fuel, or during the next scheduled operation on back-up liquid fuel.
- 13.3. When required to do so by Condition 13.2, observe the emissions unit exhaust, following 40 C.F.R. 60, Appendix A-4 Method 9 for 18-minutes to obtain 72 consecutive 15-second opacity observations.
  - a. If the observation exceeds the standard in Condition 1, monitor as described in Condition 7.
  - b. If the observation does not exceed the standard in Condition 1, no additional monitoring is required until the cumulative hours of operation exceed each subsequent multiple of 400 hours on back-up liquid fuel during a calendar year<sup>6</sup>.
- 13.4. Keep records and report in accordance with Conditions 3, 4, 8, and 9, as applicable.
- 13.5. Report under Condition 73 if the Permittee fails to comply with any of Conditions 13.2, 13.3 or 13.4.

### **Sulfur Compound Emission Standards Requirements**

14. **Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO<sub>2</sub>, from EU IDs 1, 2, 5 through 10, 12, 13, 16, 17, and 20 through 26 listed in Table A and EU IDs K6 and K7 listed in Table B to exceed 500 ppm averaged over three hours.

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<sup>6</sup> If the requirement to monitor is triggered more than once in a calendar month, only one Method-9 observation is required to be conducted by the stated deadline for that month.

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

## Sulfur Compound MR&R

*For Fuel Oil<sup>7</sup>, EU ID 10 (when burning diesel), 20 through 24, K6 and K7*

- 14.1. For EU ID 10 (when burning diesel) and EU IDs 20 through 24:
- a. the Permittee shall do one of the following for each shipment of fuel:
    - (i) If the fuel grade requires a sulfur content less than 0.5 wt% $S_{\text{fuel}}$ , keep receipts that specify fuel grade and amount; or
    - (ii) If the fuel grade does not require a sulfur content less than 0.5 wt% $S_{\text{fuel}}$ , keep receipts that specify fuel grade and amount and
      - (A) test the fuel for sulfur content; or
      - (B) obtain test results showing the sulfur content of the fuel from the supplier or refinery; the test results must include a statement signed by the supplier or refinery of what fuel they represent.
  - b. Fuel testing under Condition 14.1 must follow an appropriate method listed in 18 AAC 50.035(b)-(c) or 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1).
  - c. If a load of fuel contains greater than 0.75 percent sulfur by weight, the Permittee shall calculate SO<sub>2</sub> emissions in ppm using either the material balance calculation in Section 12 or Method 19 of 40 C.F.R. 60, Appendix A-7, adopted by reference in 18 AAC 50.040(a).
  - d. The Permittee shall report as follows:
    - (i) If SO<sub>2</sub> emissions calculated under Condition 14.1.c exceed 500 ppm, the Permittee shall report under Condition 73. When reporting under this condition, include the calculation under Condition c.
    - (ii) The Permittee shall include in the operating report required by Condition 74
      - (A) a list of the fuel grades received at the stationary source during the reporting period;
      - (B) for any grade with a maximum fuel sulfur greater than 0.5 percent sulfur, the fuel sulfur of each shipment; and
      - (C) for fuel with a sulfur content greater than 0.75 percent, the calculated SO<sub>2</sub> emissions in ppm.

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

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

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

- 14.2. For the drill rig boilers, EU IDs K6 and K7:
- a. The Permittee shall demonstrate compliance with the SO<sub>2</sub> standard in Condition 14 by complying with the fuel sulfur limit in Condition 17 and the associated monitoring, recordkeeping, and reporting requirements under Condition 17.1.

[Minor Permit AQ1411MSS01, Condition 5.1, 7/30/2014]  
[18 AAC 50.040(j)(4) & 50.326(j)(4)]  
[40 C.F.R. 71.6(a)(3) & (c)(6)]

*For Fuel Gas, EU IDs 1, 2, 5 through 9, 10 (when burning fuel gas), 12, 13, 16, 17, and 26*

- 14.3. The Permittee shall analyze a representative sample of the fuel annually to determine the sulfur content using either ASTM D4084, D5504, D4810, D4913, D6228 or GPA Standard 2377, or a listed method approved in 18 AAC 50.035(b)-(c) or 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1).
- 14.4. The Permittee shall keep records of the sulfur content analysis required under Condition 14.3.
- 14.5. The Permittee shall include copies of the records required by Condition 14.4 with the operating report required by Condition 74 for the period covered by the report.
- 14.6. The Permittee shall report as excess emissions, in accordance with Condition 73, whenever the fuel combusted causes sulfur compound emissions to exceed the standard of Condition 14.

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

### **Pre-construction Permit<sup>8</sup> Requirements**

*Owner Requested Limits to Protect Alaska Ambient Air Quality Standards (AAAQS)*

- 15. Fuel Gas H<sub>2</sub>S Limits.** To protect the AAAQS for SO<sub>2</sub>, the Permittee shall comply with the following fuel gas hydrogen sulfide (H<sub>2</sub>S) content limits:

- 15.1. The maximum H<sub>2</sub>S concentration of the fuel gas for EU IDs 13 and 26 shall not exceed 1,000 ppmv.
- 15.2. The maximum H<sub>2</sub>S concentration of the fuel gas for all other gas-fired emissions units, other than EU IDs 13 and 26, at the stationary source shall not exceed 2,000 ppmv.
- 15.3. Monitor, record, and report fuel gas H<sub>2</sub>S content as described in Condition 14.3 through 14.5.
- 15.4. Report under Condition 73 any time the fuel gas H<sub>2</sub>S concentration exceeds the limit in Conditions 15.1 and 15.2.

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<sup>8</sup> *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.

[Minor Permit AQ0060MSS03, Condition 5, 4/19/2019]  
[18 AAC 50.040(j)(4) & 50.326(j)]  
[40 C.F.R. 71.6(a)(1) & (a)(3)]

**16. Liquid Fuel Sulfur Content Limit.** To protect AAAQS for SO<sub>2</sub>, the Permittee shall comply with following fuel sulfur content limit:

16.1. The maximum sulfur content of diesel or distillate fuel burned shall not exceed 0.5 wt% S<sub>fuel</sub>.

16.2. Monitor, record, and report as described in Conditions 14.1, 14.1.b, and 14.1.d(ii) through 14.1.d(ii)(B).

16.3. Report in accordance with Condition 73 any time the fuel sulfur content of the liquid fuel burned at the stationary source exceeds the limit in Condition 16.1.

[Permit to Operate No. 9423-AA012 Amendment #1, Condition 9 and Exhibit D, 11/15/1995]  
[18 AAC 50.040(j)(4) & 50.326(j)]  
[40 C.F.R. 71.6(a)(1) & (a)(3)]

**17. Liquid Fuel Sulfur Content Limit, Drill Rig EUs.** To protect the 1-hour, 3-hour, 24-hour and annual SO<sub>2</sub> Alaska AAAQS, the Permittee shall limit the liquid fuel sulfur content to no more than 15 ppmw for all Kuukpik V Drill Rig emissions units listed in Table B.

17.1. The Permittee shall do one of the following for each shipment of fuel for the Kuukpik V Drill Rig:

- a. If the fuel grade requires a sulfur content of 15 ppmw or less, keep receipts that specify the fuel grade and amount of fuel; or
- b. If the fuel grade does not require a sulfur content of 15 ppmw or less, keep receipts that specify the fuel grade and amount of fuel and:
  - (i) test the fuel for sulfur content; or
  - (ii) 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.
- c. Fuel testing under Condition 17 must follow an appropriate method listed in 18 AAC 50.035(b)-(c) or 40 C.F.R. 60.17 incorporated by reference in 18 AAC 50.040(a)(1).
- d. The Permittee shall include in the operating report required by Condition 74:
  - (i) a list of the fuel grades received at the Kuukpik V Drill Rig during the reporting period; and
  - (ii) copies of any test results obtained in accordance with Condition 17.1.b.
- e. If the sulfur content of any liquid fuel exceeds the limit in Condition 17, the Permittee shall report in accordance with Condition 73.

[Minor Permit AQ1411MSS01, Condition 6, 7/9/2015]

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

**18. Drill Rig Configuration Limits.** To protect the annual NO<sub>2</sub>, 24-hour PM-10, annual PM-2.5, and 1-hour, 3-hour, 24-hour, and annual SO<sub>2</sub> AAAQS, the Permittee shall comply with the following:

- 18.1. Limit the total rated capacity of the Kuukpik V Drill Rig nonroad engines (NREs) to no more than 3,071 Hp.
  - a. Any time a change is made to the Kuukpik V nonroad engine emissions unit inventory, calculate and record the total nonroad engine rated capacity (Hp).
  - b. Include the total nonroad engine rated capacity (Hp) in each operating report required under Condition 74.
  - c. Report in accordance with Condition 73 any time the total nonroad engine rated capacity (Hp) exceeds the limit in Condition 18.1.
- 18.2. Construct and maintain vertical, uncapped exhaust stacks for all Kuukpik V Drill Rig EUs, except as noted below:
  - a. the exhaust stacks for EU IDs K3 and K4 (light plant generators) may be tilted to no more than 45-degrees from vertical;
  - b. the exhaust stacks for EU IDs K6 and K7 (boilers) may be capped; and
  - c. the exhaust stacks for EU IDs K1, K2, K3, K4 and K5 may have flapper valve rain covers, or other similar design, that does not hinder the exhaust plume momentum.
- 18.3. Report in accordance with Condition 73 for any stack configuration not allowed by Condition 18.2.

[Minor Permit AQ1411MSS01, Condition 7, 7/9/2015]

**19. Operating Hour Limits.** The Permittee shall not exceed the following operating hour limits during any consecutive 12-month period:

[18 AAC 50.040(j)(4) & 50.326(j)(4)]  
[40 C.F.R. 71.6(a)(1) & (c)(6)]

- 19.1. For each of EU IDs 20 and 21, 3,000 hours;
- 19.2. For each of EU IDs 22 and 23, 120 hours for the purpose of performing routine maintenance and verifying operational capability; and  
[Permit to Operate No. 9423-AA012 Amendment #1, Conditions 5 - 7, 11/15/1995]
- 19.3. For EU ID 24, 1,000 hours.  
[Minor Permit AQ0060MSS03, Condition 6, 4/19/2019]
- 19.4. The Permittee shall monitor, record, and report compliance with the corresponding operating hour limits in Conditions 19.1 through 19.3, as follows:

[18 AAC 50.040(j)(4) & 50.326(j)(4)]

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

- a. At the end of each calendar month, for each of EU IDs 20 through 24, calculate and record the monthly and consecutive 12-month total operating hours for the previous month; and for each of EU IDs 22 and 23, indicate the purpose of operation;
- b. Report under the operating report in Condition 74 the monthly and the rolling 12-month total operating hours, as calculated and recorded in Condition 19.4.a, during that reporting period.
- c. Report in accordance with Condition 73 any time the rolling 12-month total operating hours exceed any of the limits in Conditions 19.1 through 19.3

[Minor Permit AQ0060MSS03, Condition 6, 4/19/1996]

[Permit to Operate No. 9423-AA012 Amendment #1, Exhibit D, 11/15/1995]

### *Requirements to Avoid Classification under PSD*

20. The Permittee shall limit NO<sub>x</sub> emissions from EU ID 26 to no more than 27.6 tpy.
  - 20.1. Limit the operation of EU ID 26 out of SoLoNO<sub>x</sub> mode to no more than 815 hours per rolling 12-month period.
    - a. Monitor and record the date, time, duration, and reason for each time EU ID 26 operates out of SoLoNO<sub>x</sub> mode.
    - b. By the end of each calendar month, add the total hours of operation for the previous month out of SoLoNO<sub>x</sub> mode for EU ID 26.
    - c. Calculate and record the rolling 12-month period hours of operation out of SoLoNO<sub>x</sub> for EU ID 26.
    - d. Include in the operating report required under Condition 74 the monthly and rolling 12-month period hours of operation out of SoLoNO<sub>x</sub> mode for EU ID 26.
    - e. Report in accordance with Condition 73 if the hours of operation out of SoLoNO<sub>x</sub> mode for EU ID 26 exceeds the limit in Condition 20.1.

[Minor Permit AQ0060MSS03, Condition 7, 4/19/2019]

[18 AAC 50.040(j)(4) & 50.326(j)]

[40 C.F.R. 71.6(a)(1) & (a)(3)]

### **Insignificant Emissions Units**

21. For emissions units at the stationary source that are insignificant as defined in 18 AAC 50.326(d)-(i) that are not listed in this permit, the following apply:
  - 21.1. **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)]

21.2. **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)]

21.3. **Sulfur Standard:** The Permittee shall not cause or allow sulfur compound emissions, expressed as SO<sub>2</sub>, from an industrial process or fuel-burning equipment, to exceed 500 ppm averaged over three hours.

[18 AAC 50.055(c)]

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

- a. Submit the certification of compliance of Condition 75 based on reasonable inquiry;
- b. Comply with the requirements of Condition 56;
- c. Report in the operating report required by Condition 74 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; and
- d. No other monitoring, recordkeeping or reporting is required for insignificant emissions units to demonstrate compliance with the emissions standards under Conditions 21.1, 21.2, and 21.3.

[18 AAC 50.346(b)(4)]

## ***Section 4. Federal Requirements***

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

#### **NSPS Subpart A – General Provisions**

**22. NSPS Subpart A Notification.** Unless exempted by a specific subpart, for any affected facility<sup>9</sup> or existing facility<sup>10</sup> regulated under NSPS requirements in 40 C.F.R. 60, the Permittee shall furnish the Administrator<sup>11</sup> written notification or, if acceptable to both the EPA and the Permittee, electronic notification, as follows:

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

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

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

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

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

22.3. a notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 C.F.R. 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include:

- a. information describing the precise nature of the change,
- b. present and proposed emission control systems,
- c. productive capacity of the facility before and after the change, and
- d. the expected completion date of the change; and

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

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

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

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

<sup>11</sup> The Department defines the “the Administrator” to mean “the EPA and the Department” for conditions implementing the federal emission standards.

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

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

**23. NSPS Subpart A Startup, Shutdown, & Malfunction Requirements.** The Permittee shall maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of EU IDs 12, 13, and 26, any malfunctions of the associated air-pollution control equipment, or any periods during which a continuous monitoring system or monitoring device for EU IDs 12, 13, and 26 is inoperative.

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

**24. NSPS Subpart A Excess Emissions and Monitoring Systems Performance Report.** The Permittee shall submit an excess emissions and monitoring systems performance (EEMSP)<sup>12</sup> report and/or summary report form (see Condition 25) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:

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

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

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

24.2. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of EU IDs 1 through 5 and 15; the nature and cause of any malfunction (if known), and the corrective action taken or preventative measures adopted.

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

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<sup>12</sup> The federal EEMSP report is not the same as the state excess emission report required by Condition 73. Excess emissions are defined in applicable subparts.

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

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

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

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

**25. NSPS Subpart A Summary Report Form.** The Permittee shall submit to the Department and to EPA one "summary report form" in the format shown in Figure 1 of 40 C.F.R. 60.7 (see Attachment A to the Statement of Basis) for each pollutant monitored for EU IDs 12, 13, and 26. The report shall be submitted semiannually, postmarked by the 30th day following the end of each 6-month period, except when more frequent reporting is specifically required by an applicable subpart or the EPA, as follows:

[18 AAC 50.040(a)(1)]

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

25.1. If the total duration of excess emissions for the reporting period is less than one percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than five percent of the total operating time for the reporting period, submit a summary report form unless the EEMSP report described in Condition 24 is requested, or

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

25.2. If the total duration of excess emissions for the reporting period is one percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is five percent or greater of the total operating time for the reporting period, then submit a summary report form and the EEMSP report described in Condition 24.

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

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

[18 AAC 50.040(a)(1)]

[40 C.F.R. 60.8(a), Subpart A]

**27. NSPS Subpart A Good Air Pollution Control Practice (GAPCP).** At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate EU IDs 12, 13, and 26, including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. The Administrator will determine whether acceptable operating and maintenance procedures are being used based on information available, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of EU IDs 12, 13, and 26.

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

- 28. NSPS Subpart A Credible Evidence.** For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of the standards set forth in Conditions 31 and 33, nothing in 40 C.F.R. Part 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether EU IDs 12, 13, and 26 would have been in compliance with applicable requirements of 40 C.F.R. Part 60 if the appropriate performance or compliance test or procedure had been performed.

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

- 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 Conditions 31 and 33. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere.

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

### NSPS Subpart GG<sup>13</sup> – Turbines, EU IDs 12, 13, and 26

- 30. NSPS Subpart GG Applicability.** For EU IDs 12, 13, and 26 listed in Table A, the Permittee shall comply with the applicable requirements for stationary gas turbines, which commenced construction, modification, or reconstruction after October 3, 1977, with a heat input at peak load equal to or greater than 10.7 gigajoules (10 million Btu) per hour based on the lower heating value of the fuel fired.

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

- 31. NSPS Subpart GG NO<sub>x</sub> Standard.** The Permittee shall not allow the exhaust gas concentration of NO<sub>x</sub>, on a dry exhaust basis at 15 percent oxygen (O<sub>2</sub>) and ISO standard day conditions,<sup>14</sup> from EU IDs 12, 13, and 26 listed in Table A to exceed the following limits:

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

- 31.1. For EU ID 12, 167 ppmv;
- 31.2. For EU ID 13, 173 ppmv; and
- 31.3. For EU ID 26, 176 ppmv.

<sup>13</sup> The provisions of NSPS Subpart GG listed in Conditions 30 through 34 are current as amended through Feb. 27, 2014. Should EPA promulgate revisions to this subpart, the Permittee shall be subject to the revised final provisions as promulgated and not the superseded provisions summarized in these conditions.

<sup>14</sup> ISO (*International Organization for Standardization*) *standard day conditions* means 288 degrees Kelvin (59 degrees F), 60 percent relative humidity and 101.3 kilopascals (14.7 psi) pressure. [ref. 40 C.F.R. 60.331(g)]

**32. NSPS Subpart GG NO<sub>x</sub> MR&R Requirements.** The Permittee shall monitor, record, and report compliance with the respective Subpart GG NO<sub>x</sub> standard under Condition 31, as follows:

32.1. **Monitoring.** The Permittee shall comply with the following:

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

- a. **Periodic Testing.** For each turbine subject to Condition 31 that operates for 400 hours or more in any 12-month period during the life of this permit, the Permittee shall satisfy either Condition 32.1.a(i) or 32.1.a(ii).
- (i) For existing turbines whose latest emissions source testing was certified as operating at less than or equal to 90 percent of the most stringent NO<sub>x</sub> limit shown in Condition 31, the Permittee shall conduct a NO<sub>x</sub> and O<sub>2</sub> source test under 40 C.F.R. 60, Appendix A, Method 20, or Method 7E and either Method 3 or 3A, within the first applicable criteria below:
- (A) Within 5 years of the latest performance test, or
- (B) Within 1 year of the effective date of this permit if the last source test occurred greater than five years prior to effective date of this permit and the 400-hour threshold was triggered within 6 months of the permit's effective date, or
- (C) Within 1 year after exceeding 400 hours of operation in a 12-month period if the last source test occurred greater than 4 years prior to the exceedance.
- (ii) For existing turbines whose latest emissions source testing was certified as operating at greater than 90 percent of the most stringent NO<sub>x</sub> limit shown in Condition 31, the Permittee shall conduct a NO<sub>x</sub> and O<sub>2</sub> source test under 40 C.F.R. 60, Appendix A, Method 20, or Method 7E and either Method 3 or 3A, annually until two consecutive tests show performance results certified at less than or equal to 90 percent of the most stringent NO<sub>x</sub> limit shown in Condition 31.
- b. **Substituting Test Data.** The Permittee may use results of a source test completed under Condition 32.1.a performed on only one of a group of turbines to satisfy the requirements of the condition for the other turbines in the group if
- (i) the Permittee demonstrates that test results are less than or equal to 90 percent of the most stringent NO<sub>x</sub> limit shown in Condition 31, and are projected under Condition 32.1.c to be less than or equal to 90 percent of the most stringent limit at maximum load;
- (ii) for any source test conducted after the effective date of this permit, the Permittee identifies in a source test plan under Condition 65
- (A) the turbine to be tested;

- (B) the other turbines in the group that are to be represented by the test;  
and
  - (C) why the turbine to be tested is representative, including that each turbine in the group
    - (1) is located at a stationary source operated and maintained by the Permittee;
    - (2) is tested under close to identical ambient conditions;
    - (3) is the same make and model and has identical injectors and combustor; and
    - (4) uses the same fuel type from the same supply origin.
  - (iii) The Permittee may not use substitute test results to represent emissions from a turbine or group of turbines if that turbine or group of turbines is operating at greater than 90 percent of the most stringent NO<sub>x</sub> limit shown in Condition 31.
- c. **Load.** The Permittee shall comply with the following:
- (i) Conduct all tests under Condition 32.1 in accordance with 40 C.F.R. 60.335, except as otherwise approved in writing by the Department or by EPA if the circumstances of the Department or EPA approval are still valid at the time. For the highest load condition, if it is not possible to operate the turbine during the test at maximum load, the Permittee will test the turbine when operating at the highest load achievable by the turbine under the ambient and stationary source operating conditions in effect at the time of the test.
  - (ii) Demonstrate in the source test plan whether the test is scheduled when maximum NO<sub>x</sub> emissions are expected.
  - (iii) If the highest operating rate tested is less than the maximum load of the tested turbine or another turbine represented by the test data,
    - (A) for each such turbine the Permittee shall provide to the Department as an attachment to the source test report
      - (1) additional test information from the manufacturer or from previous testing of units in the group of turbines; if using previous testing of the group of turbines, the information must include all available test data for the turbines in the group, and
      - (2) a demonstration based on the additional test information that projects the test results from Condition 32.1 to predict the highest load at which emissions will comply with the respective limit in Condition 31;

- (B) the Permittee shall not operate any turbine represented by the test data at loads for which the Permittee's demonstration predicts that emissions will exceed the limit in Condition 31;
- (C) the Permittee shall comply with a written finding prepared by the Department that
  - (1) the information is inadequate for the Department to reasonably conclude that compliance is assured at any load greater than the test load, and that the Permittee must not exceed the test load,
  - (2) the highest load at which the information is adequate for the Department to reasonably conclude that compliance assured is less than maximum load, and the Permittee must not exceed the highest load at which compliance is predicted, or
  - (3) the Permittee must retest during a period of greater expected demand on the turbine, and
- (D) the Permittee may revise a load limit by submitting results of a more recent Method 20, or Method 7E and either Method 3 or 3A, test done at a higher load, and, if necessary, the accompanying information and demonstration described in Condition 32.1.c(iii)(A); the new limit is subject to any new Department finding under Condition 32.1.c(iii)(C) and
- (iv) In order to perform a source test required under Condition 32.1, the Permittee may operate a turbine at a higher load than that prescribed by Condition 32.1.c(iii).
- (v) For the purposes of Conditions 32.1 through 32.3, maximum load means the hourly average load that is the smallest of
  - (A) 100 percent of manufacturer's design capacity of the gas turbine at ISO standard day conditions;
  - (B) the highest load allowed by an enforceable condition that applies to the turbine; or
  - (C) the highest load possible considering permanent physical restraints on the turbine or the equipment which it powers.

32.2. **Recordkeeping.** The Permittee shall keep records as follows:

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

- a. The Permittee shall comply with the following for each turbine for which a demonstration under Condition 32.1.c(iii) does not show compliance with any of the limits in Condition 31 at maximum load.
  - (i) The Permittee shall keep records of

- (A) load; or
  - (B) as approved by the Department, surrogate measurements for load and the method for calculating load from those measurements.
- (ii) Records in Condition 32.2.a shall be hourly or otherwise as approved by the Department.
  - (iii) Within one month after submitting a demonstration under Condition 32.1.c(iii)(A)(2) that predicts that the highest load at which emissions will comply is less than maximum load, or within one month of a Department finding under Condition 32.1.c(iii)(C), whichever is earlier, the Permittee shall propose to the Department how load or load surrogates will be measured, and shall propose and comply with a schedule for installing any necessary equipment and beginning monitoring. The Permittee shall comply with any subsequent Department direction on the load monitoring methods, equipment, or schedule.
- b. For any turbine subject to Condition 31, that will operate less than 400 hours in any 12 consecutive months, the Permittee shall keep monthly records of the hours of operation.

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

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

- a. In each operating report under Condition 74 the Permittee shall list for each turbine tested or represented by testing at less than maximum load and for which the Permittee must limit load under Condition 32.1.c(iii)
  - (i) the load limit;
  - (ii) the turbine identification; and
  - (iii) the highest load recorded under Condition 32.2.a during the period covered by the operating report.
- b. In each operating report under Condition 74 for each turbine for which Condition 32.1 has not been satisfied because the turbine normally operates less than 400 hours in any 12 consecutive months, the Permittee shall identify
  - (i) the turbine;
  - (ii) the highest number of operating hours for any 12 consecutive months ending during the period covered by the report; and
  - (iii) any turbine that operated for 400 or more hours.
- c. The Permittee shall report under Condition 73 if
  - (i) a test result exceeds the emission standard;

- (ii) Method 20, or Method 7E and either Method 3 or 3A, testing is required under Condition 32.1.a(i) or 32.1.a(ii) but not performed, or
- (iii) the turbine was operated at a load exceeding that allowed by Conditions 32.1.c(iii)(B) and 32.1.c(iii)(C); exceeding a load limit is deemed a single violation rather than a multiple violation of both monitoring and the underlying emission limit.

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

**33. NSPS Subpart GG SO<sub>2</sub> Standard.** For EU IDs 12, 13, and 26, the Permittee shall not burn in any stationary gas turbine any fuel which contains total sulfur in excess of 0.8 wt% S<sub>fuel</sub> (8000 ppmw).

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

**34. NSPS Subpart GG SO<sub>2</sub> MR&R Requirements.** The Permittee shall monitor, record, and report compliance with the applicable Subpart GG SO<sub>2</sub> standard in Condition 33, as follows:

34.1. **Monitoring.** The Permittee shall monitor compliance with the Subpart GG SO<sub>2</sub> standard in Condition 33, as follows:

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

- a. Monitor the total sulfur content of the fuel being fired in the turbine, except as provided in Condition 34.1.b. Determine the sulfur content of the fuel using total sulfur methods described in Condition 34.2. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 weight percent (4000 ppmw), the Permittee may use ASTM D4084-82, 94, D5504-01, D6228-98, or Gas Processors Association Standard 2377-86 (all of which are incorporated by reference-see 40 C.F.R. 60.17), which measure the major sulfur compounds.
- b. The Permittee may elect not to monitor the total sulfur content of the gaseous fuel combusted in the turbine, if the gaseous fuel is demonstrated to meet the definition of natural gas in 40 C.F.R. 60.331(u),<sup>15</sup> regardless of whether an existing custom schedule approved by the Administrator requires such

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

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<sup>15</sup> As defined in 40 C.F.R. 60.331(u), “*Natural gas* means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth’s surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Equivalents of this in other units are as follows: 0.068 weight percent total sulfur, 680 parts per million by weight (ppmw) total sulfur, and 338 parts per million by volume (ppmv) at 20 degrees Celsius total sulfur. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 British thermal units (Btu) per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.

monitoring. The Permittee shall use the following source of information to make the required demonstration:<sup>16</sup>

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

- (i) The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or

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

- (ii) Representative fuel sampling data, which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in 40 C.F.R. 75, Appendix D, Section 2.3.1.4 or 2.3.2.4 is required.

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

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

[40 C.F.R. 60.334(h)(4), Subpart GG]

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

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

- (i) *Gaseous fuel.* For owners and operators that elect not to demonstrate sulfur content using options in Condition 34.1.b, and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel shall be determined and recorded once per unit operating day.

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

- (ii) *Custom schedules.* Notwithstanding the requirements of Condition 34.1.d(i), operators or fuel vendors may develop custom schedules for determination of the total sulfur content of gaseous fuels, based on the design and operation of the affected facility and the characteristics of the fuel supply. Except as provided in 40 C.F.R. 60.334(i)(3)(i) and (i)(3)(ii), custom schedules shall be substantiated with data and shall be approved by the Administrator before they can be used to comply with the standard in Condition 33. The two custom sulfur monitoring schedules set forth in 40 C.F.R. 60.334(i)(3)(i)(A) through (D) and 60.334(i)(3)(ii) are acceptable without prior Administrative approval.

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

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<sup>16</sup> Periodic fuel sulfur monitoring under Condition 34.1.a and reporting under Conditions 34.4.a do not apply to Subpart GG turbines that have demonstrated that natural gas fuel meets the definition of 40 C.F.R. 60.331(u) as set out by Condition 34.1.b.

34.2. **Test Methods and Procedures.** If the owner or operator is required under Condition 34.1.d to periodically determine the sulfur content of the fuel combusted in the turbine, the owner or operator shall analyze the samples for the total sulfur content of the fuel as follows:

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

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

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

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

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

34.3. **Recordkeeping.** The Permittee shall keep records as required by Conditions 34.1 and 34.2, and in accordance with Condition 69.

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

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

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

- a. For each affected unit monitored periodically to determine the fuel sulfur content under Condition 34.1.a, the Permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 C.F.R. 60.7(c) as summarized in Condition 24, except where otherwise approved by a custom fuel monitoring schedule. Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. For the purpose of reports required under Condition 24, periods of excess emissions and monitor downtime that shall be reported are defined as follows:

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

- (i) For samples of gaseous fuel obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit.

- (ii) A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample.

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

- b. If electing to comply with Condition 34.1.b, the Permittee shall include with the operating report under Condition 74 a certified statement indicating that the fuel gas combusted at the stationary source meets the definition of natural gas in 40 C.F.R. 60.331(u), pursuant to 40 C.F.R. 60.334(h)(3).

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

##### **NESHAP Subpart A – General Provisions**

- 35. NESHAP Subpart A Applicability.** The Permittee shall comply with the applicable requirements of 40 C.F.R. 63 Subpart A in accordance with the provisions for applicability of Subpart A in Table 8 to NESHAP Subpart ZZZZ for EU IDs 20 through 24 listed in Table A.

[18 AAC 50.040(c)(1) & (j)(4) and 50.326(j)]

[40 C.F.R. 71.6(a)(1) & (a)(3)]

[40 C.F.R. 63.1-63.15, Subpart A]

[40 C.F.R. 63.6665 & Table 8, Subpart ZZZZ]

##### **NESHAP Subpart ZZZZ<sup>17</sup> – Stationary RICE, EU IDs 20 through 24**

- 36. NESHAPs Subpart ZZZZ Applicability.** For EU IDs 20 through 24, the Permittee shall comply with applicable requirements for existing<sup>18</sup> stationary reciprocating internal combustion engines (RICE) located at an area source of hazardous air pollutant (HAP) emissions. The Permittee shall at all times comply with Conditions 37 through 40.

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

40 C.F.R. 71.6((a)(1)

[40 C.F.R. 63.6585(c), 63.6590(a)(1)(iii), & 63.6605(a), Subpart ZZZZ]

- 37. NESHAPs Subpart ZZZZ GAPCP, Operation and Maintenance Requirements.** The Permittee shall comply with the following:

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

[40 C.F.R. 71.6(a)(1) & (3)(i)]

- 37.1. At all times, operate and maintain EU IDs 20 through 24, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based

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<sup>17</sup> The provisions of NESHAP Subpart ZZZZ listed in Conditions 35 through 39 are current as amended through February 27, 2014. Should EPA promulgate revisions to this subpart, the Permittee shall be subject to the revised final provisions as promulgated and not the superseded provisions summarized in these conditions.

<sup>18</sup> In accordance with 40 C.F.R. 63.6590(a)(1)(iii), a stationary RICE located at an area source of HAP emissions is *existing* if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of EU IDs 20 through 24.

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

37.2. The Permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to either:

- a. the manufacturer's emission-related written instructions for operation and maintenance; or
- b. a maintenance plan developed by the Permittee which must provide, to the extent practicable, for the maintenance and operation of the engine(s) in a manner consistent with good air pollution control practice for minimizing emissions.

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

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

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

**38. NESHAP Subpart ZZZZ Work and Management Practices Standards.** For EU IDs 20 through 24, the Permittee shall comply with the following work and management practices:

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

[40 C.F.R. 71.6(a)(1) & (3)(i)]

[40 C.F.R. 63.6603(b)(1), Subpart ZZZZ]

38.1. Except during periods of startup, the Permittee shall meet the following requirements:

- a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first, except as allowed by Condition 38.4;
- b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
- c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

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

38.2. During periods of startup, the Permittee shall comply with Condition 37.3.

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

38.3. Demonstrate continuous compliance with the requirements in Conditions 38.1 and 38.2 by complying with Condition 37.2.

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

38.4. The Permittee has the option to utilize an oil analysis program in order to extend the specified oil change requirement in Condition 38.1.a, as described below:

- a. The oil analysis must be performed at the same frequency specified for changing the oil in Condition 38.1.a.
- b. The analysis program must, at a minimum, analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows:
  - (i) Total Base Number is less than 30 percent of the Total Base Number of the oil when new;
  - (ii) viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or
  - (iii) percent water content (by volume) is greater than 0.5.
- c. If all of the condemning limits in Conditions 38.4.b(i) through 38.4.b(iii) are not exceeded, the Permittee is not required to change the oil.
- d. If any of the limits in Conditions 38.4.b(i) through 38.4.b(iii) is exceeded, the Permittee must change the oil within 2 business days of receiving the results of the analysis.
  - (i) If the engine is not in operation when the results of the analysis are received, the Permittee must change the oil within 2 business days or before commencing operation, whichever is later.
- e. The analysis program must be part of the maintenance plan for the engine.

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

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

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

- 39.1. If electing to operate and maintain EU IDs 20 through 24 according to a maintenance plan developed by the Permittee as allowed under Condition 37.2.b, keep records of the maintenance conducted on EU IDs 20 through 24 in order to demonstrate that the stationary RICE and after-treatment control device (if any) are operated and maintained according to the maintenance plan.

[40 C.F.R. 63.6655(e)(3), Subpart ZZZZ]
- 39.2. If electing to utilize the oil analysis program described in Condition 38.4, keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine.

[40 C.F.R. 63.6625(i), Subpart ZZZZ]
- 39.3. Keep records in a form suitable and readily available for expeditious review. Keep each record in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 C.F.R. 63.10(b)(1), except that all records may be retained off site.

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

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

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

40.1. Include in the operating report required by Condition 74 a report of all deviations as defined in 40 C.F.R. 63.6675 and of each instance in which an applicable requirement in 40 C.F.R. 63, Subpart A (Table 8 to Subpart ZZZZ) was not met.

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

40.2. Notify the Department in accordance with Condition 73 if any of the requirements in Conditions 35 through 40 were not met.

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

## **40 C.F.R. Part 61 NESHAP**

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

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

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

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

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

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

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

[18 AAC 50.040(d) and 50.326(j)]  
[40 C.F.R. 82.174(b) - (d), Subpart G]

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

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

#### **40 C.F.R. 63 NESHAP Applicability Determinations**

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

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

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

[40 C.F.R. 63.1(b), 63.5(b)(4), 63.6(c)(1), 63.9(b), & 63.10(b)(3), Subpart A]

## ***Section 5. General Conditions***

### **Standard Terms and Conditions**

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

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

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

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

- 48.** The permit does not convey any property rights of any sort, nor any exclusive privilege.

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

- 49. Administration Fees.** The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-403.

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

- 50. Assessable Emissions.** The Permittee shall pay to the Department an annual emission fee based on the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410.<sup>19</sup> The assessable emission fee rate is set out in 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of

50.1. the stationary source's assessable potential to emit of 1,295 TPY; or

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

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<sup>19</sup> If the stationary source has not commenced construction or operation on or before March 31<sup>st</sup>, submit to the Department's Anchorage office a transmittal letter certified under 18 AAC 50.205 that identifies the source's assessable emissions for the previous fiscal year to be zero tons per year and provide estimates for when construction and operation will commence.

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

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

- 51.1. No later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions via the Department's Air Online Services (AOS) System at <http://dec.alaska.gov/applications/air/airtoolsweb> using the Permittee Portal option and filling out the Emission Fee Estimate form. Alternatively, the report may be submitted by:
  - a. E-mail under a cover letter using [dec.aq.airreports@alaska.gov](mailto:dec.aq.airreports@alaska.gov); or
  - b. hard copy to the following address: ADEC Air Permits Program, ATTN: Assessable Emissions Estimate, 555 Cordova Street, Anchorage, Alaska 99501.
- 51.2. The Permittee shall include with the assessable emissions report all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates.
- 51.3. If no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in Condition 50.1.

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

**52. Good Air Pollution Control Practice.** The Permittee shall do the following for EU IDs 1, 2, 5 through 10, 16, 17, 25 and EU IDs K1 through K7:

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

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

**53. 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)]

**54. 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), and 50.346(c)]

- 54.1. 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 54.1.a or to address the results of Department inspections that found potential problems; and
  - (ii) to prevent future dust problems.

54.2. The Permittee shall report according to Conditions 56.1.e and 56.1.f.

**55. 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)]

**56. 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, 50.326(j)(3), and 50.346(a)]  
[40 C.F.R. 71.6(a)(3)]

**56.1. Monitoring, Recordkeeping, and Reporting:**

- a. If emissions present a potential threat to human health or safety, the Permittee shall report any such emissions according to Condition 73.
- b. 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 56.
- c. 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 56; or
  - (ii) the Department notifies the Permittee that it has found a violation of Condition 56.
- d. The Permittee shall keep records of
  - (i) the date, time, and nature of all emissions complaints received;
  - (ii) the name of the person or persons that complained, if known;

- (iii) a summary of any investigation, including reasons the Permittee does or does not believe the emissions have caused a violation of Condition 56; and
  - (iv) any corrective actions taken or planned for complaints attributable to emissions from the stationary source.
- e. With each stationary source operating report under Condition 74, the Permittee shall include a brief summary report which must include
- (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.
- f. 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.

**57. 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<sup>20</sup> listed in Conditions 31, 33, or 42 (refrigerants), the Permittee shall

57.1. take all reasonable steps to minimize levels of emissions that exceed the standard; and

57.2. report in accordance with Condition 73.1.b; the report must include information on the steps taken to mitigate emissions and corrective measures taken or to be taken.

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

### Open Burning Requirements

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

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

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<sup>20</sup> As defined in 18 AAC 50.990(106), the term “*technology-based emission standard*” means a best available control technology (BACT) standard; a lowest achievable emission rate (LAER) standard; a maximum achievable control technology (MACT) standard established under 40 C.F.R. 63, Subpart B, adopted by reference in 18 AAC 50.040(c); a standard adopted by reference in 18 AAC 50.040(a) or (c); and any other similar standard for which the stringency of the standard is based on determinations of what is technologically feasible, considering relevant factors.

## ***Section 6. General Source Testing and Monitoring Requirements***

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

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

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

[18 AAC 50.220(b)]

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

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

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

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

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

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

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

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

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

61.4. Source testing for emissions of PM<sub>2.5</sub> and PM<sub>10</sub>, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified in 40 C.F.R. 60, Appendix A.

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

61.5. Source testing for emissions of PM<sub>10</sub> and PM<sub>2.5</sub> must be conducted in accordance with the procedures specified in 40 C.F.R. 51, Appendix M, Methods 201 or 201A and 202.

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

61.6. Source testing for emissions of any pollutant may be determined using an alternative method approved by the Department in accordance with 40 C.F.R. 63 Appendix A, Method 301.

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

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

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

**63. Test Exemption.** The Permittee is not required to comply with Conditions 65, 66 and 67 when the exhaust is observed for visible emissions by Method 9 Plan (Condition 2.2).

[18 AAC 50.345(a)]

**64. 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)]

**65. Test Plans.** Except as provided in Condition 63, before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance and must specify how the emissions unit will operate during the test and how the Permittee will document that operation. The Permittee shall submit a complete plan within 60 days after receiving a request under Condition 59 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)]

**66. Test Notification.** Except as provided in Condition 63, 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)]

**67. Test Reports.** Except as provided in Condition 63, 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 70. 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)]

**68. Particulate Matter Calculations.** In source testing for compliance with the particulate matter standards in Conditions 6 and 21.2, 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**

- 69.** 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) and 50.326(j)]  
[40 C.F.R. 60.7(f), Subpart A, and 40 C.F.R. 71.6(a)(3)(ii)(B)]

- 69.1. Copies of all reports and certifications submitted pursuant to this section of the permit; and
- 69.2. 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**

- 70. 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.

- 70.1. The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if
- a. a certifying authority registered under AS 09.80.020 verifies that the electronic signature is authentic; and
  - b. the person providing the electronic signature has made an agreement, with the certifying authority described in Condition 70.1.a, that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.

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

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

71.1. Submit hard copy to the following address: ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician.

71.2. Provide electronic submittals either by:

- a. using the Department's Air Online Services (AOS) system at <http://dec.alaska.gov/applications/air/airtoolsweb/> using the Permittee Portal option; or
- b. an email, under a cover letter, addressed to [dec.aq.airreports@alaska.gov](mailto:dec.aq.airreports@alaska.gov).

[18 AAC 50.326(j)(3)]

**72. 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, and 50.326(a) & (j)]  
[40 C.F.R. 71.5(a)(2) and 71.6(a)(3)]

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

73.1. Except as provided in Condition 56, the Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit as follows:

- a. In accordance with 18 AAC 50.240(c), as soon as possible after the event commences or is discovered, report
  - (i) emissions that present a potential threat to human health or safety; and
  - (ii) excess emissions that the Permittee believes to be unavoidable;
- b. In accordance with 18 AAC 50.235(a), within two working days after the event commenced or was discovered, report an unavoidable emergency, malfunction, or non-routine repair that causes emissions in excess of a technology-based emission standard; and
- c. Report all other excess emissions and permit deviations
  - (i) within 30 days after the end of the month in which the excess emissions or deviation occurred, except as provided in Conditions 73.1.c(ii) and 73.1.c(iii);

- (ii) if a continuous or recurring excess emissions is not corrected within 48 hours of discovery, within 72 hours of discovery unless the Department provides written permission to report under Condition 73.1.c(i); and
- (iii) for failure to monitor, as required in Conditions 4.2.b and 9.1.b.

73.2. When reporting excess emissions or permit deviations, the Permittee shall report using either the Department's online form, which can be found at <http://dec.alaska.gov/applications/air/airtoolsweb> using the Permittee Portal option, or if the Permittee prefers, the form contained in Section 13 of this permit. The Permittee must provide all information called for by the form that is used.

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

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

**74. Operating Reports.** During the life of this permit<sup>21</sup>, the Permittee shall submit to the Department an original and one copy of 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.

74.1. 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.

74.2. If excess emissions or permit deviations that occurred during the reporting period are not reported under Condition 74.1,

a. The Permittee shall identify

- (i) the date of the deviation;
- (ii) the equipment involved;
- (iii) the permit condition affected;
- (iv) a description of the excess emissions or permit deviation; and
- (v) any corrective action or preventive measures taken and the date of such actions; or

b. When excess emissions or permit deviations have already been reported under Condition 73 the Permittee shall cite the date or dates of those reports.

74.3. The operating report must include, for the period covered by the report, a listing of emissions monitored under Conditions 2.2.e and 32.1.a(ii), which trigger additional testing or monitoring, whether or not the emissions monitored exceed an emission standard. The Permittee shall include in the report:

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<sup>21</sup> *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.

- 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.

74.4. **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(a) and 50.326(j)]  
[40 C.F.R. 71.6(a)(3)(iii)(A)]

**75. Annual Compliance Certification.** Each year by March 31, the Permittee shall compile and submit to the Department an annual compliance certification report according to Condition 71.

75.1. 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.

75.2. **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.

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

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

**76. Emission Inventory Reporting.** The Permittee shall submit to the Department reports of actual emissions for the previous calendar year, by emissions unit, of CO, NH<sub>3</sub>, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, VOCs and Lead (Pb) (and lead compounds) for the previous calendar year using the form in Section 14 of this permit, as follows:

76.1. Each year by April 30, if the stationary source's potential to emit for the previous calendar year equals or exceeds:

- a. 250 TPY of NH<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> or VOCs; or

- b. 2,500 TPY of CO, NO<sub>x</sub> or SO<sub>2</sub>.
- 76.2. Every third year by April 30, if the stationary source's potential to emit for the previous calendar year (except actual emissions for Pb) equals or exceeds:
  - a. 0.5 TPY of actual Pb, or
  - b. 1,000 TPY of CO; or
  - c. 100 TPY of SO<sub>2</sub>, NH<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub> or VOCs.
- 76.3. For reporting under Condition 76.2, the Permittee shall report in 2021 for calendar year 2020, 2024 for calendar year 2023, etc., in accordance with the Environmental Protection Agency schedule.
- 76.4. Include in the report required by this condition, the required data elements contained within the form in Section 14 or those contained in Tables 2a and 2b of Appendix A to Subpart A of 40 C.F.R. 51 for each stack associated with an emissions unit.

[18 AAC 50.040(j)(4), 50.200, and 50.346(b)(8) & (9)]  
[40 C.F.R. 51.15, 51.30(a)(1) & (b)(1), and 40 C.F.R. 51, Appendix A to Subpart A]

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

- 77.1. **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 74 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
- 77.2. **78**The Permittee shall keep a copy of each U.S. EPA-issued monitoring waiver or custom monitoring schedule with the permit.

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

## **Section 8. Permit Changes and Renewal**

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

- 78.1. 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;
- 78.2. The information shall be submitted to the Part 70 Operating Permit Program, US EPA – Region 10, Air Permits and Toxics Branch, Mail Stop: 15-H13, 1200 Sixth Avenue, Suite 155, Seattle, WA 98101-3188;
- 78.3. 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
- 78.4. The Permittee shall maintain records as necessary to demonstrate compliance with this condition.

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

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

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

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

- 80.1. Each such change shall meet all applicable requirements and shall not violate any existing permit term or condition;
- 80.2. 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;
- 80.3. The change shall not qualify for the shield under 40 C.F.R. 71.6(f); and
- 80.4. The Permittee shall keep a record describing changes made at the stationary source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

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

**81. Operational Flexibility.** The Permittee may make Section 502(b)(10)<sup>22</sup> changes within the permitted stationary source without requiring a permit revision if the changes are not modifications under any provision of Title I of the Act and the changes do not exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions).

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

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

81.3. The permit shield described in 40 C.F.R. 71.6(f) shall not apply to any change made pursuant to Condition 81.

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

**82. Permit Renewal.** To renew this permit, the Permittee shall submit to the Department<sup>23</sup> an application under 18 AAC 50.326 no sooner than **October 29, 2023** and no later than **October 29, 2024**. The renewal application shall be complete before the permit expiration date listed on the cover page of this permit. Permit expiration terminates the stationary source's right to operate unless a timely and complete renewal application has been submitted consistent with 40 C.F.R. 71.7(b) and 71.5(a)(1)(iii).

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

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<sup>22</sup> As defined in 40 C.F.R. 71.2, Section 502(b)(10) changes are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

<sup>23</sup> 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**

- 83.** Compliance with permit terms and conditions is considered to be compliance with those requirements that are
- 83.1. included and specifically identified in the permit; or
  - 83.2. determined in writing in the permit to be inapplicable.
- [18 AAC 50.326(j)(3) and 50.345(a) & (b)]
- 84.** The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14.120(c), 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for
- 84.1. an enforcement action;
  - 84.2. permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or
  - 84.3. denial of an operating permit renewal application.
- [18 AAC 50.040(j), 50.326(j), and 50.345(a) & (c)]
- 85.** For applicable requirements with which the stationary source is in compliance, the Permittee shall continue to comply with such requirements.
- [18 AAC 50.040(j)(3) & (4) and 50.326(j)]  
[40 C.F.R. 71.6(c)(3) and 71.5(c)(8)(iii)(A)]
- 86.** 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)(3) & (4) and 50.326(j)]  
[40 C.F.R. 71.6(c)(3) and 71.5(c)(8)(iii)(B)]
- 87.** 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) and 50.345(a) & (d)]
- 88.** 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
- 88.1. enter upon the premises where a source subject to the permit is located or where records required by the permit are kept;
  - 88.2. have access to and copy any records required by the permit;
  - 88.3. inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and
  - 88.4. sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.
- [18 AAC 50.326(j)(3) and 50.345(a) & (h)]

**Section 10. Permit As Shield from Inapplicable Requirements**

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

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

- 89.1. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section; or
- 89.2. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance.

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

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

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

**Table C - Permit Shields Granted**

EU ID	Non-Applicable Requirements	Reason for Non-Applicability
Stationary source-wide	40 C.F.R. 60, Subparts D, Db, Dc, E, CCCC, DDDD, EEEE, FFFF	No affected EUs within the permitted stationary source.
	40 C.F.R. 63 Subpart HHH	This stationary source is not a “major source” of HAPs as defined in 40 C.F.R. 63.1271.
	40 C.F.R. 82.30, Subpart B – Servicing of Motor Vehicle Air Conditioners	Stationary source does not service motor vehicle air conditioners.
	18 AAC 50.055(b)(3) – PM emissions standard for industrial process in operation before July 1, 1972	No affected EUs within the permitted stationary source.
Diesel storage tanks	40 C.F.R. 60 Subparts K, Ka, and Kb	Permittee did not commence construction, modification, or reconstruction of any tanks in these categories after June 11, 1973. In the event that any of these emissions units is modified or reconstructed as defined in 40 C.F.R. 60 during the term of this permit, and become subject to the requirements of 40 C.F.R. 60, Subpart Kb, this permit shield becomes null and void. The Permittee is required to notify the Department prior to reconstructing or modifying any of these emissions units.

<b>EU ID</b>	<b>Non-Applicable Requirements</b>	<b>Reason for Non-Applicability</b>
16 and 17	40 C.F.R. 60 Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	The heat input capacity, with the existing burner configuration, is less than 10 MMBtu/hr. The permit shield for Subpart Dc only applies to these units until modified, reconstructed or replaced. The Permittee is required to notify the Department prior to reconstructing or modifying any of these EUs.
1, 2, 5 through 10	40 C.F.R. 60 Subpart GG, Standards of Performance for Stationary Gas Turbines	EU IDs 1, 2, and 5 through 10 were not constructed, modified, or reconstructed after October 3, 1977.
1, 2, 5 through 10, 12, 13 and 26	40 C.F.R. 60 Subpart KKKK, Standards for Performance for Stationary Combustion Turbines	EU IDs 1, 2, 5 through 10, 12, 13 and 26 were not constructed after February 18, 2005 and have not been modified or reconstructed thereafter. The permit shield for Subpart KKKK only applies to these units until modified, reconstructed or replaced. The Permittee is required to notify the Department prior to reconstructing or modifying any of these EUs.
20 through 24	40 C.F.R. 60 Subpart IIII	EU IDs 20 through 24 are exempt from the requirements of 40 C.F.R. 60 Subpart IIII because they commenced construction, modification, or reconstruction prior to the applicability date of July 11, 2005. The permit shield for Subpart IIII only applies to currently installed units until modified, reconstructed or replaced.
20 through 24	40 C.F.R. 60 Subpart JJJJ	EU IDs 20 through 24 are exempt from the requirements of 40 C.F.R. 60 Subpart JJJJ because they are not spark ignition reciprocating internal combustion engines (SI RICE).

## Section 11. Visible Emissions Forms

### VISIBLE EMISSIONS OBSERVATION FORM

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

- Source Name: full company name, parent company or division or subsidiary information, if necessary.
- Address: street (not mailing or home office) address of facility where visible emissions observation is being made.
- Phone (Key Contact): number for appropriate contact.
- Stationary Source ID Number: number from NEDS, agency file, etc.
- Process Equipment, Operating Mode: brief description of process equipment (include type of facility) and operating rate, % capacity, and/or mode (e.g. charging, tapping, shutdown).
- Control Equipment, Operating Mode: specify type of control device(s) and % utilization, control efficiency.
- Describe Emission Point: for identification purposes, stack or emission point appearance, location, and geometry; and whether emissions are confined (have a specifically designed outlet) or unconfined (fugitive).
- Height Above Ground Level: stack or emission point height relative to ground level; can use engineering drawings, Abney level, or clinometer.
- Height Relative to Observer: indicate height of emission point relative to the observation point.
- Distance from Observer: distance to emission point; can use rangefinder or map.
- Direction from Observer: direction plume is traveling from observer.
- Describe Emissions and Color: include physical characteristics, plume behavior (e.g., looping, lacy, condensing, fumigating, secondary particle formation, distance plume visible, etc.), and color of emissions (gray, brown, white, red, black, etc.). Note color changes in comments section.
- Visible Water Vapor Present?: check “yes” if visible water vapor is present.
- If Present, note in the Comments column whether the Plume is “attached” if water droplet plume forms prior to exiting stack, and “detached” if water droplet plume forms after exiting stack.
- Point in Plume at Which Opacity was Determined: describe physical location in plume where readings were made (e.g., 1 ft above stack exit or 10 ft. after dissipation of water plume).
- Describe Plume Background: object plume is read against, include texture and atmospheric conditions (e.g., hazy).
- Background Color: sky blue, gray-white, new leaf green, etc.
- Sky Conditions: indicate color of clouds and cloud cover by percentage or by description (clear, scattered, broken, overcast).
- Wind Speed: record wind speed; can use Beaufort wind scale or hand-held anemometer to estimate.
- Wind Direction From: direction from which wind is blowing; can use compass to estimate to eight points.
- Ambient Temperature: in degrees Fahrenheit or Celsius.
- Wet Bulb Temperature: can be measured using a sling psychrometer
- RH Percent: relative humidity measured using a sling psychrometer; use local US Weather Bureau measurements only if nearby.
- Source Layout Sketch: include wind direction, sun position, associated stacks, roads, and other landmarks to fully identify location of emission point and observer position.
- Draw North Arrow: to determine, point line of sight in direction of emission point, place compass beside circle, and draw in arrow parallel to compass needle.
- Sun’s Location: point line of sight in direction of emission point, move pen upright along sun location line, mark location of sun when pen’s shadow crosses the observer’s position.
- Observation Date: date observations conducted.
- Start Time, End Time: beginning and end times of observation period (e.g., 1635 or 4:35 p.m.).
- Data Set: percent opacity to nearest 5%; enter from left to right starting in left column. Use a second (third, etc.) form, if readings continue beyond 30 minutes. Use dash (-) for readings not made; explain in adjacent comments section.
- Comments: note changing observation conditions, plume characteristics, and/or reasons for missed readings.
- Range of Opacity: note highest and lowest opacity number.
- Observer’s Name: print in full.
- Observer’s Signature, Date: sign and date after performing VE observation.
- Observer’s Affiliation: observer’s employer.
- Certifying Organization, Certified By, Date: name of “smoke school,” certifying observer, and date of most recent certification.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION AIR PERMITS PROGRAM - VISIBLE EMISSIONS OBSERVATION FORM							Page No.
Stationary Source Name		Type of Emission Unit		Observation Date		Start Time	End Time
Emission Unit Location				Sec	0	15	30
				Min			45
				Comments			
City	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				
Describe Emissions & Color				9			
Start	End						
Visible Water Vapor Present? If yes, determine approximate distance from the stack exit to where the plume was read				10			
No	Yes			11			
Point in Plume at Which Opacity Was Determined				12			
Describe Plume Background		Background Color		13			
Start	End	Start	End				
Sky Conditions:				14			
Start	End						
Wind Speed		Wind Direction From		15			
Start	End	Start	End				
Ambient Temperature		Wet Bulb Temp	RH percent	16			
SOURCE LAYOUT SKETCH: 1 Stack or Point Being Read 2 Wind Direction From				17			
3 Observer Location 4 Sun Location 5 North Arrow 6 Other Stacks				18			
				19			
				20			
				21			
				22			
				23			
				24			
				25			
				26			
				27			
				28			
				29			
Additional Information:				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:						Observer's Affiliation:	
Title		Date		Certifying Organization:		Date	
				Certified By:		Date	
<b>Data Reduction:</b>							
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)							
<b>Average Opacity Summary:</b>							
Set Number		Time		Opacity		Comments	
		Start	End	Sum	Average		

**Section 12. Material Balance Calculation**

If the sulfur content of a fuel shipment is greater than 0.75 wt% $S_{fuel}$ , calculate the three-hour exhaust concentration of  $SO_2$  using the following equations:

A.  $= 31,200 \times [wt\%S_{fuel}] = 31,200 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

B.  $= 0.148 \times [wt\%S_{fuel}] = 0.148 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

C.  $= 0.396 \times [wt\%C_{fuel}] = 0.396 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

D.  $= 0.933 \times [wt\%H_{fuel}] = 0.933 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

E.  $= B + C + D = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

F.  $= 21 - [vol\%_{dry}O_2, exhaust] = 21 - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

G.  $= [vol\%_{dry}O_2, exhaust] \div F = \underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

H.  $= 1 + G = 1 + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

I.  $= E \times H = \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

$SO_2$  concentration  $= A \div I = \underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$  ppm

The wt% $S_{fuel}$ , wt% $C_{fuel}$ , and wt% $H_{fuel}$  are equal to the weight percent's 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 14.1. The fuel weight percent's 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 ORSAT analysis 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 13. ADEC Notification Form<sup>24</sup>**

Dolly Varden Platform  
Stationary Source Name

AQ0060TVP04  
Air Quality Permit Number

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
- Deviation from Permit Condition – Complete Section 2 and Certify
- Deviations from COBC, CO, or Settlement Agreement – Complete Section 2 and Certify

**Section 1. Excess Emissions**

(a) **Was the exceedance**  Intermittent or  Continuous

(b) **Cause of Event** (Check one that applies):

- Start Up/Shut Down  Natural Cause (weather/earthquake/flood)
- Control Equipment Failure  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.

<sup>24</sup> Revised as of September 27, 2010.

(d) **Emissions Units (EU) 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 Exceedance

(e) **Type of Incident** (please check only one):

- Opacity \_\_\_\_\_ %       Venting \_\_\_\_\_ gas/scf       Control Equipment Down  
 Fugitive Emissions       Emission Limit Exceeded       Recordkeeping Failure  
 Marine Vessel Opacity       Flaring       Other \_\_\_\_\_

(f) **Unavoidable Emissions:**

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

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

Certify Report (go to end of form)

### Section 2. Permit Deviations

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

- |   |  |
|---|--|
| <input type="checkbox"/> Emissions Unit-Specific                          | <input type="checkbox"/> Generally Applicable Requirements       |
| <input type="checkbox"/> Failure to Monitor/Report                        | <input type="checkbox"/> Reporting/Monitoring for Diesel Engines |
| <input type="checkbox"/> General Source Test/Monitoring Requirements      | <input type="checkbox"/> Insignificant Emissions Unit            |
| <input type="checkbox"/> Recordkeeping/Reporting/Compliance Certification | <input type="checkbox"/> Stationary Source Wide                  |
| <input type="checkbox"/> Standard Conditions Not Included in the Permit   |  |

Other Section: \_\_\_\_\_ (Title of section and section number of your permit).

(b) **Emissions Units (EU) Involved:**

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

EU ID	EU Name	Permit Condition/Potential Deviation

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

Describe briefly what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) **Corrective Actions:**

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

**Certification:**

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

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Phone Number: \_\_\_\_\_

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

**To submit this report:**

1. Department's Air Online Services using the Permittee Portal option:

<http://dec.alaska.gov/applications/air/airtoolsweb>

Or

2. Fax to: 907-451-2187

Or

3. Email to: [DEC.AQ.Airreports@alaska.gov](mailto:DEC.AQ.Airreports@alaska.gov)

Or

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

Or

5. Phone Notifications: 907-451-5173

*Phone notifications require a written follow-up report.*

*If submitted online, report must be submitted by an authorized E-Signer for the stationary source.*

[18 AAC 50.346(b)(3)]

### Section 14. Emission Inventory Form

A detailed instruction on completing and submitting the emission inventory form is available on the Department’s Air Online Services (AOS) system at <http://dec.alaska.gov/Applications/Air/airtoolsweb/PointSourceEmissionInventory> by selecting the “Emission Inventory Instructions” button. This form can also be completed online in the Department’s AOS system at <http://dec.alaska.gov/applications/air/airtoolsweb> and selecting the Permittee Portal option.

<b>ADEC Reporting Form Emission Inventory Reporting</b> <b>State of Alaska Department of Environmental Conservation</b> <b>Division of Air Quality</b>		<b>Emission Inventory</b> <b>Year- [ ]</b> <b>Check one:</b> Annual <input type="checkbox"/> Triennial <input type="checkbox"/>	
<u>Mandatory information is highlighted in bright yellow. Make additional copies as needed.</u>			
<b>Stationary Source Detail</b>			
<b>Inventory Start Date</b>			
<b>Inventory End Date</b>			
<b>ADEC ID or Permit Number</b>			
<b>EPA ID</b>			
<b>Census Area/Community</b>			
<b>Facility Name</b>			
<b>Facility Physical Location</b>		<b>Address</b>	
		<b>City, State, Zip Code</b>	
		<b>Latitude</b>	<b>Longitude</b>
		<b>Legal Description:</b>	
<b>Owner Name</b>			
<b>Owner Address</b>			
<b>Owner contact number</b>			
<b>Mailing Contact Information</b>		<b>Address</b>	
		<b>City, State, Zip Code</b>	
<b>Line of Business (NAICS)</b>			
<b>Facility Status</b>			

<b>Emissions Unit Data</b>			
<b>Specifications</b>			
<b>ID</b>		<b>Design Capacity</b>	
<b>Description</b>			
<b>Emissions Unit Status</b>			
<b>Manufacturer</b>		<b>Manufactured Year</b>	
<b>Model Number</b>		<b>Serial Number</b>	
<b>Regulations</b>			
<b>Regulation/Description</b>			
<b>Control Equipment (List All if applicable)</b>			
<b>ID</b>			
<b>System Description</b>			
<b>Equipment Type(s)</b>			
<b>Manufacturer</b>			
<b>Model</b>			
<b>Control Efficiency (%)</b> :			
<b>Capture Efficiency (%)</b>			
<b>Pollutants Controlled</b>		<b>Reduction Efficiency (%)</b>	
		<b>Reduction Efficiency (%)</b>	
<b>Processes</b>			
<b>Process</b>	<b>Primary Process</b>		
<b>SCC Code</b>			
<b>Material Processed</b>			
<b>Period Start</b>			
<b>Period End</b>			
<b>Throughput (units):</b>			
<b>Summer %</b>			
<b>Fall %</b>			
<b>Winter %</b>			
<b>Spring %</b>			
<b>Operational Schedule</b>			
<b>Days/Week</b>			
<b>Hours/Day</b>			
<b>Weeks/Year</b>			
<b>Hours/Year</b>			
<b>Fuel Characteristics</b>			
<b>Heat Content</b>	<b>Elem. Sulfur Content (%)</b>	<b>H2S Sulfur Content</b>	<b>Ash Content (if applicable)</b>
<b>Heating</b>			
<b>Heat Input</b>	<b>Heat Output</b>	<b>Heat Values Convention</b>	

<b>Emission Operating Type</b>					
<b>Pollutant</b>	<b>Emission Factor (EF)</b>	<b>EF Numerator</b>	<b>EF Denominator</b>	<b>Emission Calculation Method</b>	<b>Tons</b>
<b>Carbon Monoxide (CO)</b>					
<b>Nitrogen Oxides (NO<sub>x</sub>)</b>					
<b>PM<sub>10</sub> Primary (PM<sub>10</sub>-PRI)</b>					
<b>PM<sub>2.5</sub> Filterable (PM<sub>25</sub>-FIL)<sup>25</sup></b>					
<b>PM Condensable (PM-CON)<sup>26</sup></b>					
<b>Sulfur Dioxide (SO<sub>2</sub>)</b>					
<b>NH<sub>3</sub> (Ammonia)</b>					
<b>Lead and lead compounds</b>					
<b>Volatile Organic Compounds (VOC)</b>					
<b>Emissions' Release Point</b>					
<b>Release Point ID</b>					
<b>Apportion%</b>					
<b>Process</b>	<b>Secondary Process (if applicable)</b>				
<b>SCC Code</b>	<b>(ex. 20100201)</b>				
<b>Material Processed</b>					
<b>Period Start</b>					
<b>Period End</b>					
<b>Throughput (units):</b>					
<b>Summer %</b>					
<b>Fall %</b>					
<b>Winter %</b>					
<b>Spring %</b>					
<b>Operational Schedule</b>					
<b>Days/Week</b>					
<b>Hours/Day</b>					
<b>Weeks/Year</b>					
<b>Hours/Year</b>					
<b>Fuel Characteristics</b>					
<b>Heat Content</b>	<b>Elem. Sulfur Content (%)</b>	<b>H2S Sulfur Content</b>		<b>Ash Content (if applicable)</b>	
<b>Heating</b>					
<b>Heat Input</b>		<b>Heat Output</b>		<b>Heat Values Convention</b>	
<b>Emissions Operating Type:</b>					

<sup>25</sup> Report PM-2.5 filterable and PM condensable portions of the PM-2.5 Primary emissions, as applicable, in accordance with Federal Regulation 40 C.F.R. 51.15(a)(1)(vi). Refer to EPA's May 2017 "Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations" (see Section 4.2.1) for guidance on the reporting of PM-2.5 filterable and condensable emissions.

<sup>26</sup> Please note on the inventory form if there is no available emission factor that can be used for an applicable condensable PM. For example, EPA AP-42 Table 3.3-1 does not contain a condensable PM emission factor for diesel engines smaller than 600 Hp.

Pollutant	Emission Factor (EF)	EF Numerator	EF Denominator	Emission Calculation Method	Tons
Carbon Monoxide (CO)					
Nitrogen Oxides (NO <sub>x</sub> )					
PM <sub>10</sub> Primary (PM <sub>10</sub> -PRI)					
PM <sub>2.5</sub> Primary (PM <sub>25</sub> -PRI)					
Sulfur Dioxide (SO <sub>2</sub> )					
Lead and Lead Compounds					
NH <sub>3</sub> (Ammonia)					
Volatile Organic Compounds (VOC)					
Emissions' Release Point					
Release Point ID					
Apportion%					

Stack Detail (Release Point)	
<b>&gt; Specifications</b>	
ID	
Type	
Description	
Stack Status	
<b>&gt; Stack Parameters</b>	
Stack Height (ft)	
Stack Diameter (ft)	
Exit Gas Temp (F)	
Exit Gas Velocity (fps)	
Exit Gas Flow Rate (acfm)	
<b>&gt; Geographic Coordinate</b>	
Latitude	
Longitude	
Datum	
Accuracy (meters)	
Base Elevation (meters)	

**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 70.)*

**Submit this report as follows:**

1. Direct data entry for emission inventory can be done through the Department's Air Online Services (AOS) System <http://dec.alaska.gov/Applications/Air/airtoolsweb/> and clicking the Permittee Portal link. A myAlaska account is needed to gain access and a profile needs to be set up in Permittee Portal

OR

2. E-mail to: [DEC.AQ.airreports@alaska.gov](mailto:DEC.AQ.airreports@alaska.gov)

OR

3. Mail to: ADEC  
Air Permits Program  
ATTN: Emissions Inventory  
555 Cordova Street  
Anchorage, Alaska 99501

OR

4. Fax this form to: 907-269-7508

If submitted online, the complete report must be submitted by an authorized E-Signer for the stationary source according to Condition 70.1.

[18 AAC 50.346(b)(9)]

**DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
**AIR QUALITY CONTROL MINOR PERMIT**

**Minor Permit:** AQ0060MSS03  
**Rescinds Permit:** AQ0060MSS01

**Final Date – April 19, 2019**

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit AQ0060MSS03 to the Permittee listed below.

**Permittee:** Hilcorp Alaska, LLC

3800 Centerpoint Drive, Suite 100  
Anchorage, AK 99503  
(907) 777-8300

**Stationary Source:** Dolly Varden Platform

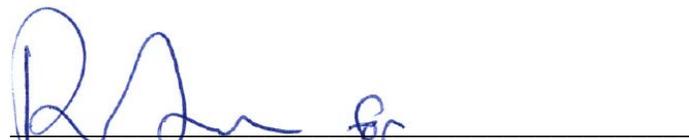
**Location:** Latitude: 60° 48' 23.3" N; Longitude: 151° 37' 57.7" W

**Project:** SoLoNOx Owner Requested Limit

**Permit Contact:** Julieanna Potter, (907) 777-8444, jupotter@hilcorp.com

The Permittee submitted an application for Minor Permit AQ0060MSS03 under 18 AAC 50.508(6) in order to revise the terms and conditions of a Title I permit.

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



James R. Plosay, Manager  
Air Permits Program

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## Abbreviations and Acronyms

AAC.....	Alaska Administrative Code	NESHAPs.....	National Emission Standards for Hazardous Air Pollutants [as contained in 40 C.F.R. 61 and 63]
ADEC.....	Alaska Department of Environmental Conservation	NOx.....	nitrogen oxides
AS.....	Alaska Statutes	NRE.....	nonroad engine
ASTM.....	American Society for Testing and Materials	NSPS.....	New Source Performance Standards [as contained in 40 C.F.R. 60]
BACT.....	best available control technology	O & M.....	operation and maintenance
bhp.....	brake horsepower	O <sub>2</sub> .....	oxygen
CDX.....	Central Data Exchange	PAL.....	plantwide applicability limitation
CEDRI.....	Compliance and Emissions Data Reporting Interface	PM-10.....	particulate matter less than or equal to a nominal 10 microns in diameter
C.F.R. ....	Code of Federal Regulations	PM-2.5.....	particulate matter less than or equal to a nominal 2.5 microns in diameter
CAA.....	Clean Air Act	ppm.....	parts per million
CO.....	carbon monoxide	ppmv, ppmvd.....	parts per million by volume on a dry basis
Department.....	Alaska Department of Environmental Conservation	psia.....	pounds per square inch (absolute)
dscf.....	dry standard cubic foot	PSD.....	prevention of significant deterioration
EPA.....	US Environmental Protection Agency	PTE.....	potential to emit
EU.....	emissions unit	SIC.....	Standard Industrial Classification
gr/dscf.....	grain per dry standard cubic foot (1 pound = 7000 grains)	SIP.....	State Implementation Plan
gph.....	gallons per hour	SPC.....	Standard Permit Condition or Standard Operating Permit Condition
HAPs.....	hazardous air pollutants [as defined in AS 46.14.990]	SO <sub>2</sub> .....	sulfur dioxide
hp.....	horsepower	The Act.....	Clean Air Act
ID.....	emissions unit identification number	TPH.....	tons per hour
kPa.....	kiloPascals	tpy.....	tons per year
LAER.....	lowest achievable emission rate	VOC.....	volatile organic compound [as defined in 40 C.F.R. 51.100(s)]
MACT.....	maximum achievable control technology [as defined in 40 C.F.R. 63]	VOL.....	volatile organic liquid [as defined in 40 C.F.R. 60.111b, Subpart Kb]
MMBtu/hr.....	million British thermal units per hour	vol%.....	volume percent
MMSCF.....	million standard cubic feet	wt%.....	weight percent
MR&R.....	monitoring, recordkeeping, and reporting	wt% <sub>S<sub>fuel</sub></sub> .....	weight percent of sulfur in fuel

## Section 1 Emissions Unit Inventory

**Emissions Unit (EU) Authorization.** The Permittee is authorized to install and operate the EUs listed in Table 1 in accordance with the terms and conditions of this permit and the minor permit application. The information in Table 1 is for identification purposes only, unless otherwise noted in the permit. The specific EU descriptions do not restrict the Permittee from replacing an EU identified in Table 1.

**Table 1 – EU Inventory**

EU #	Tag No.	EU Name	EU Description	Rating/Max Capacity	Installation Date
1	V-PM-481A	Solar Saturn T-1300 Turbine	Solar Pump Drive #1 Fuel Gas	1,400 Hp	1969
2	V-PM-482A	Solar Saturn T-1300 Turbine	Solar Pump Drive #2 Fuel Gas	1,400 Hp	1969
5	V-PM-485A	Solar Saturn T-1300 Turbine	Solar Pump Drive #5 Fuel Gas	1,400 Hp	1969
6	V-PM-486A	Solar Saturn T-1300 Turbine	Solar Pump Drive #6 Fuel Gas	1,400 Hp	1969
7	V-PM-487A	Solar Saturn T-1300 Turbine	Solar Pump Drive #7 Fuel Gas	1,400 Hp	1968
8	V-PM-0021	Solar Saturn T-1300 Turbine	AC #1 Generator Drive Fuel Gas	800 kW	1969
9	V-PM-0022	Solar Saturn T-1300 Turbine	AC #2 Generator Drive Fuel Gas	800 kW	1970
10	V-PM-0023	Solar Saturn T-1300 Turbine	AC #3 Generator Drive Fuel Gas/Diesel	750 kW	1970
12	V-PM-003A	Solar Centaur T-4500 Turbine	Compressor Drive Fuel Gas	4,500 Hp	1985
13	V-PM-6370	Solar Centaur T-5900 Turbine	ESP Generator AC#6 Fuel Gas	4,230 kW	2002
16	V-B-0001	Bryan Boiler	Glycol Boiler #1 Fuel Gas	8.5 MMBtu/hr	2006
17	V-B-0002	Bryan Boiler	Glycol Boiler #2 Fuel Gas	8.5 MMBtu/hr	2006
20	V-PM-0122	Detroit Diesel 8V71 Engine (NE)	East Skagit Crane Diesel	350 Hp	1989
21	V-PM-0121	Detroit Diesel 8V71 Engine (SW)	West Skagit Crane Diesel	350 Hp	1989
22	V-PM-0494	Detroit Diesel Engine	Fire Pump Drive P-3 Diesel	405 kW	1994
23	V-PM-0031	Detroit Diesel Engine	Detroit Backup Generator Diesel	400 kW	1994
24	V-PM-6380	Caterpillar 3306B Engine	Air Compressor Driver Diesel	265 BHp	2003
25	V-SP-SF/HP/LP	Flare (SF/HP/LP) and Pilot	Safety/Operating Flares	570 MMcf/yr	1995
26	V-PM-6700	Solar Taurus Turbine AC#7	SoLoNOx Turbine	5.65 MW	TBD

Table Notes:

<sup>A</sup> EUs 1, 2, 5-10, 12, 13, 16, 17, and 20-25 have already been installed at the stationary source and are not included in this permit action.

1. The Permittee shall comply with all applicable provisions of AS 46.14 and 18 AAC 50 when installing a replacement EU, including any applicable minor or construction permit requirements.

## **Section 2      Fee Requirements**

2.    **Administration Fees.** The Permittee shall pay to the Department all assessed permit administration fees. Administration fee rates are set out in 18 AAC 50.400-403.
3.    **Assessable Emissions.** The Permittee shall pay to the Department annual emission fees based on the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410. The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities 10 tons per year or greater. The quantity for which fees will be assessed is the lesser of:
  - 3.1    the stationary source's assessable potential to emit of 1,629 tpy; or
  - 3.2    the stationary source's projected annual rate of emissions that will occur from July 1 to the following June 30, based upon credible evidence of actual annual emissions emitted during the most recent calendar year or another 12 month period approved in writing by the Department, when demonstrated by the most representative of 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;
    - d.    other methods and calculations approved by the Department, including appropriate vendor-provided emissions factors when sufficient documentation is provided.
4.    **Assessable Emission Estimates.** Emission fees will be assessed as follows:
  - 4.1    no later than March 31 of each year, the Permittee may submit an estimate of the stationary source's assessable emissions via the Department's Air Online Services (AOS) System at <http://dec.alaska.gov/applications/air/airtoolsweb> using the Permittee Portal option and filling out the Emission Fee Estimate form. Alternatively, the report may be submitted by:
    - a.    e-mail under a cover letter using [dec.aq.airreports@alaska.gov](mailto:dec.aq.airreports@alaska.gov); or
    - b.    hard copy to the following address: ADEC Air Permits Program, ATTN: Assessable Emissions Estimate, 555 Cordova Street, Anchorage, Alaska 99501.
  - 4.2    The Permittee shall include with the assessable emissions report all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates.
  - 4.3    If no estimate is submitted on or before March 31 of each year, emission fees for the next fiscal year will be based on the potential to emit set out in Condition 3.1.

### **Section 3      *Ambient Air Quality Protection Requirements***

5.    **Fuel Hydrogen Sulfide Limits.** The Permittee shall comply with the following fuel hydrogen sulfide (H<sub>2</sub>S) limits to protect ambient air:
  - 5.1    The maximum H<sub>2</sub>S concentration of the fuel gas for EU IDs 13 and 26 shall not exceed 1,000 ppmv.
  - 5.2    The maximum H<sub>2</sub>S concentration of the fuel gas for all other gas-fired emission units at the stationary source other than EU IDs 13 and 26 shall not exceed 2,000 ppmv.
  - 5.3    Monitor, record, and report fuel gas H<sub>2</sub>S content as described in the applicable operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50.
  - 5.4    Report under excess emissions and permit deviations as described in the applicable operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50 any time the fuel gas H<sub>2</sub>S concentration exceeds the limit in Conditions 5.1 and 5.2.
  
6.    **Operational Limit.** The Permittee shall limit the operation of EU ID 24 to no more than 1,000 hours per rolling 12-month period. Monitor, report, and record as follows:
  - 6.1    Record the total hours of operation of EU ID 24 for each calendar month the unit operates.
  - 6.2    At the end of each calendar month, calculate and record the rolling 12-month total operating hours for EU ID 24 for the previous month;
  - 6.3    Report under the operating report described in the applicable operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50, the rolling 12-month total operating hours for EU ID 24, recorded in Condition 6.2.
  - 6.4    Report under excess emissions requirements as described in the applicable operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50, any time the rolling 12-month total by EU ID 24 exceed the limit in Condition 6.

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**Section 4 ORLs to Avoid Classification under 18 AAC 50.502(c)(3)  
and 18 AAC 50.306**

**Avoidance Limits for NO<sub>x</sub>:**

7. The Permittee shall limit NO<sub>x</sub> emissions to no more than 27.6 tpy NO<sub>x</sub> for EU 26.
  - 7.1 Install as EU ID 26, a turbine with a dry low NO<sub>x</sub> combustion technology.
  - 7.2 Limit the operation of EU ID 26 out of SoLoNO<sub>x</sub> mode to no more than 815 hours per rolling 12-month period.
    - a. Monitor and record the date, time, duration, and reason for each time EU ID 26 operates out of SoLoNO<sub>x</sub> mode.
    - b. By the end of each calendar month, add the total hours of operation for the previous month out of SoLoNO<sub>x</sub> mode for EU ID 26.
    - c. Calculate and record the rolling 12-month period hours of operation out of SoLoNO<sub>x</sub> for EU ID 26.
    - d. Report under the operating report described in the applicable operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50 the monthly and rolling 12-month period hours of operation out of SoLoNO<sub>x</sub> mode for EU ID 26.
    - e. Report under excess emissions requirements as described in the applicable operating permit issued for the stationary source under AS 46.14.130(b) and 18 AAC 50, if the hours of operation out of SoLoNO<sub>x</sub> mode for EU ID 26 exceeds the limit in Condition 7.2.

## **Section 5 Recordkeeping, Reporting, and Certification Requirements**

8. **Certification.** The Permittee shall certify any permit application, report, affirmation, or compliance certification submitted to the Department and required under the permit by including the signature of a responsible official for the permitted stationary source following the statement: “*Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.*” Excess emissions reports must be certified either upon submittal or with an operating report required for the same reporting period. All other reports and other documents must be certified upon submittal.
  - 8.1 The Department may accept an electronic signature on an electronic application or other electronic record required by the Department if
    - a. A certifying authority registered under AS 09.25.510 verifies that the electronic signature is authentic; and
    - b. The person providing the electronic signature has made an agreement with the certifying authority described in Condition 8.1a that the person accepts or agrees to be bound by an electronic record executed or adopted with that signature.
9. **Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall submit reports, compliance certifications, and/or other submittals required by this permit, via the Department’s Air Online Services (AOS) System at <http://dec.alaska.gov/applications/air/airtoolsweb> using the Permittee Portal option.
  - 9.1 Alternatively, the documents may be certified in accordance with Condition 8 and submitted either by:
    - a. E-mail under a cover letter using [dec.aq.airreports@alaska.gov](mailto:dec.aq.airreports@alaska.gov); or
    - b. Certified mail to the following address: ADEC Air Permits Program, ATTN: Compliance Technician, 610 University Ave., Fairbanks, AK 99709-3643.

## **Section 6      Standard Permit Conditions**

10. The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for
  - 10.1 an enforcement action; or
  - 10.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280.
11. 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.
12. 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.
13. The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
14. The permit does not convey any property rights of any sort, nor any exclusive privilege.
15. 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
  - 15.1 enter upon the premises where an emissions unit subject to this permit is located or where records required by the permit are kept;
  - 15.2 have access to and copy any records required by this permit;
  - 15.3 inspect any stationary source, equipment, practices, or operations regulated by or referenced in the permit; and
  - 15.4 sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

## **Section 7      *Permit Documentation***

### Date

July 5, 2018

October 12, 2018

January 24, 2019

### Document Details

Application Received for Minor Permit AQ0060MSS03.

Response received from Hilcorp Alaska, LLC regarding additional application information.

Received application amendment from Hilcorp Alaska, LLC.

## **Section 8 Complaint Form**

### **COMPLAINT FORM**

Date \_\_\_\_\_ Time: \_\_\_\_\_

Activities Involved:

Provide a description of reported complaint. Attach sheets as necessary.

If applicable, operational conditions which contributed to the complaint:

If applicable, ambient conditions which contributed to the complaint:

If applicable, describe measures taken to immediately address the complaint.

If applicable, describe measures taken to address preventing the condition which generated the complaint.

If applicable, describe any reason that you feel the complaint may not be a violation:

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

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## Attachment 1 – Visible Emissions Form

### 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.”

- Source Name: full company name, parent company or division or subsidiary information, if necessary.
- Address: street (not mailing or home office) address of facility where VE observation is being made.
- Phone (Key Contact): number for appropriate contact.
- Source ID Number: number from NEDS, agency file, etc.
- Process Equipment, Operating Mode: brief description of process equipment (include type of facility) and operating rate, % capacity, and/or mode (e.g. charging, tapping, shutdown).
- Control Equipment, Operating Mode: specify type of control device(s) and % utilization, control efficiency.
- Describe Emission Point: for identification purposes, stack or emission point appearance, location, and geometry; and whether emissions are confined (have a specifically designed outlet) or unconfined (fugitive).
- Height Above Ground Level: stack or emission point height relative to ground level; can use engineering drawings, Abney level, or clinometer.
- Height Relative to Observer: indicate height of emission point relative to the observation point.
- Distance from Observer: distance to emission point; can use rangefinder or map.
- Direction from Observer: direction plume is traveling from observer.
- Describe Emissions and Color: include physical characteristics, plume behavior (e.g., looping, lacy, condensing, fumigating, secondary particle formation, distance plume visible, etc.), and color of emissions (gray, brown, white, red, black, etc.). Note color changes in comments section.
- Visible Water Vapor Present?: check “yes” if visible water vapor is present.
- If Present, is Plume...: check “attached” if water droplet plume forms prior to exiting stack, and “detached” if water droplet plume forms after exiting stack.
- Point in Plume at Which Opacity was Determined: describe physical location in plume where readings were made (e.g., 1 ft above stack exit or 10 ft. after dissipation of water plume).
- Describe Plume Background: object plume is read against, include texture and atmospheric conditions (e.g., hazy).
- Background Color: sky blue, gray-white, new leaf green, etc.
- Sky Conditions: indicate cloud cover by percentage or by description (clear, scattered, broken, overcast).
- Wind Speed: record wind speed; can use Beaufort wind scale or hand-held anemometer to estimate.
- Wind Direction From: direction from which wind is blowing; can use compass to estimate to eight points.
- Ambient Temperature: in degrees Fahrenheit or Celsius.  
Wet Bulb Temperature: can be measured using a sling psychrometer  
RH Percent: relative humidity measured using a sling psychrometer; use local US Weather Bureau measurements only if nearby.
- Source Layout Sketch: include wind direction, sun position, associated stacks, roads, and other landmarks to fully identify location of emission point and observer position.  
Draw North Arrow: to determine, point line of sight in direction of emission point, place compass beside circle, and draw in arrow parallel to compass needle.  
Sun’s Location: point line of sight in direction of emission point, move pen upright along sun location line, mark location of sun when pen’s shadow crosses the observer’s position.
- Observation Date: date observations conducted.
- Start Time, End Time: beginning and end times of observation period (e.g., 1635 or 4:35 p.m.).
- Data Set: percent opacity to nearest 5%; enter from left to right starting in left column. Use a second (third, etc.) form, if readings continue beyond 30 minutes. Use dash (-) for readings not made; explain in adjacent comments section.  
Comments: note changing observation conditions, plume characteristics, and/or reasons for missed readings.  
Range of Opacity: note highest and lowest opacity number.
- Observer’s Name: print in full.  
Observer’s Signature, Date: sign and date after performing VE observation.
- Organization: observer’s employer.
- Certified By, Date: name of “smoke school” certifying observer and date of most recent certification.

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION AIR QUALITY DIVISION - VISIBLE EMISSIONS OBSERVATION FORM							Page No. _____		
Source Name	Type of Source		Observation Date	Start Time		End Time			
Address	City	State	Zip	Sec	0	15	30	45	Comments
				Min	1				
Phone # (Key Contact)	Source ID Number		2						
Process Equipment	Operating Mode		3						
Control Equipment	Operating Mode		4						
Describe Emission Point			5						
Height above ground level	Height relative to observer	Inclinometer Reading		6					
Distance From Observer	Direction From Observer		8						
	Start	End							
Describe Emissions & Color			9						
Visible Water Vapor Present? If yes, determine approximate distance from the stack exit to where the plume was read			10						
No	Yes								
Point in Plume at Which Opacity Was Determined			11						
Describe Plume Background		Background Color		12					
Start		Start		13					
End		End							
Sky Conditions: Start			14						
Wind Speed	Wind Direction From		15						
	Start	End							
Ambient Temperature	Wet Bulb Temp	RH percent	16						
NOTES: 1 Stack or Point Being Read 2 Wind Direction From			17						
3 Observer Location 4 Sun Location 5 North Arrow 6 Other Stacks			18						
			19						
			20						
			21						
			22						
			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:									
Title		Date	Organization						
			Certified By:		Date				

## Attachment 2 - ADEC Notification Form

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

<u>Dolly Varden Platform</u>	<u>AQ0060MSS03</u>
<b>Stationary Source Name</b>	<b>Air Quality Permit</b>
<u>Hilcorp Alaska, LLC</u>	
<b>Company Name</b>	<b>Date</b>

**When did you discover the Excess Emissions/Permit Deviation?**

Date: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Time: \_\_\_\_\_ :/ \_\_\_\_\_

**When did the event/deviation?**

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

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

**What was the duration of the event/deviation?** \_\_\_\_\_ : \_\_\_\_\_ (hrs:min) or \_\_\_\_\_ days  
(total # of hrs, min, or days, if intermittent then include only the duration of the actual emissions/deviation)

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

- Excess Emissions Complete Section 1 and Certify  
 Deviation from permit conditions complete Section 2 and certify  
 Deviation from COBC, CO, or Settlement Agreement Complete Section 2 and certify

### Section 1. Excess Emissions

(a) **Was the exceedance**  Intermittent or  Continuous

(b) **Cause of Event (Check one that applies):**

- Start Up/Shut Down  Natural Cause (weather/earthquake/flood)  
 Control Equipment Failure  Scheduled Maintenance/Equipment Adjustments  
 Bad fuel/coal/gas  Upset Condition  Other

(c) **Description**

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

**(d) Emission unit(s) Involved:**

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

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

**(e) Type of Incident** (please check only one):

- Opacity      %                       Venting      (gas/scf)                       Control Equipment Down  
 Fugitive Emissions                       Emission Limit Exceeded                       Record Keeping Failure  
 Marine Vessel Opacity                       Failure to monitor/report                       Flaring  
 Other:

**(f) Unavoidable Emissions:**

- Do you intend to assert that these excess emissions were unavoidable?       YES       NO  
Do you intend to assert the affirmative defense of 18 AAC 50.235?       YES       NO

Certify Report (go to end of form)

## Section 2. Permit Deviations

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

- Emission Unit Specific
- General Source Test/Monitoring Requirements
- Recordkeeping/Reporting/Compliance Certification
- Standard Conditions Not Included in Permit
- Generally Applicable Requirements
- Reporting/Monitoring for Diesel Engines
- Insignificant Emission Unit
- Stationary Source-Wide
- Other Section: (title of section and section # of your permit)

(b) **Emission unit(s) Involved:**

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

<u>EU ID</u>	<u>Emission Unit Name</u>	<u>Permit Condition /Potential Deviation</u>

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

Describe briefly, what happened and the cause. Include the parameters/operating conditions and the potential deviation.

(d) **Corrective Actions:**

Describe actions taken to correct the deviation or potential deviation and to prevent future recurrence.

Certification:

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

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Signature: \_\_\_\_\_ Phone Number: \_\_\_\_\_

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

**To submit this report:**

1. Department's Air Online Services using the Permittee Portal option:

<http://dec.alaska.gov/applications/air/airtoolsweb>

*If submitted online, report must be submitted by an authorized E-Signer for the stationary source.*

Or

2. Fax to: 907-451-2187

Or

3. Email to: [DEC.AQ.Airreports@alaska.gov](mailto:DEC.AQ.Airreports@alaska.gov)

Or

4. Mail to: ADEC

Air Permits Program  
610 University Avenue  
Fairbanks, AK 99709-3643

Or

5. Phone Notifications: 907-451-5173

*Phone notifications require a written follow-up report.*