Alyeska pipeline SERVICE COMPANY

P.O. Box 196660 ANCHORAGE, ALASKA 99519-6660 TELEPHONE (907) 787-8700

October 28, 2020

Government Letter No. 45920

Alaska Department of Environmental Conservation
Air Permit Program
555 Cordova Street
Anchorage, Alaska 99501

Attn: Permit Intake Clerk

Subject: Pump Station 3 – Application for Renewal of Operating Permit AQ0074TVP03

Alyeska Pipeline Service Company (Alyeska) submits this application for an Air Quality Control (AQC) Operating Permit for Pump Station 3 (PS 3). The stationary source currently operates under Permit AQ0074TVP03, which expires on June 9, 2021, and as required by 18 AAC 50.326, an application must be submitted no sooner than December 9, 2019 and no later than December 9, 2020.

Pursuant to AS 46.14.150, and 18 AAC 50.326, this application is timely. Alyeska understands that completeness will be evaluated by the Alaska Department of Environmental Conservation (ADEC) according to the processes and elements established under 40 CFR 71.7.

Alyeska believes that this submittal constitutes a complete operating permit application according to the requirements of 18 AAC 50.326, which incorporates 40 CFR 71.7 and other relevant sections of 40 CFR Part 71. The application accompanying this letter utilizes the application forms required by ADEC.

Consistent with 18 AAC 50.400(a)(1) Alyeska understands that we will continue to pay an annual permit administrative fee and that no other fees are required with this submittal. If you have any questions or require additional information, please contact Don Mark Anthony at (907) 787-8568.

Sincerely,

Klinton D. VanWingerden
Operations Director

Attachment: PS 3 Operating Permit Application

cc: EPA Region 10

Application for Renewal of Operating Permit AQ0074TVP03

Pump Station 3

October 2020

Form Series A

Form A1
Stationary Source (General Information)

FORM A1
Stationary Source (General Information)

GENERAL INFORMATION

1. Permittee:

Permittee Name: Alyeska Pipeline Service Company

Mailing Address Line 1: P.O. Box 196660

Mailing Address Line 2

City: Anchorage State: AK Zip Code: 99519-6660

2. Stationary Source Name: Pump Station 3 (PS-3)

3. Stationary Source Physical Address : Sections 8, 9, 16 & 17, T7S, R14E

Physical Address Line 1: 112 miles south of Prudhoe Bay, AK

Physical Address Line 2 Umiat Meridian

City: N/A State: AK Zip Code: N/A

4. Location Latitude: N 68° 50' 36" Longitude: W 148° 49' 40"

Click here to enter text.

5. Primary SIC Code: 4612 SIC Code Description: Crude Oil Pipelines ***Primary NAICS Code: 4861***

6. Current/Previous Title V Air Permit No.: AQ0074TVP03 Expiration Date: June 9, 2021

7. Does this application contain confidential data? ☐ Yes ☒ No

8. APPLICATION IS BEING MADE FOR:

☐ Initial Title V Permit for this Stationary Source ☐ Modify Title V Permit (currently permitted) ☒ Title V Permit Renewal

9. CONTACT INFORMATION (Attach additional sheets if needed)

Owner:	***Operator:***
Name/Title: See current permit	Name/Title: APSC
Mailing Address Line 1:	Mailing Address Line 1: See above
Mailing Address Line 2	Mailing Address Line 2
City: State: Zip Code:	City: State: Zip Code:
Permittee's Responsible Official:	***Designated Agent:***
Name/Title: Klinton D. VanWingerden/Operations Director	Name/Title: CT Corporation
Mailing Address Line 1: APSC	Mailing Address Line 1: 9360 Glacier Hwy
Mailing Address Line 2 P.O. Box 196660	Mailing Address Line 2 Suite 202
City: Anchorage State: AK Zip Code: 99519	City: Juneau State: AK Zip Code: 99801
Stationary Source and Building Contact:	***Fee Contact:***
Name/Title: Mark Dahl/Tim Jones/Maintenance Supervisor PS-3 and PS-4	Name/Title: Alice Joseph/Environmental Program Specialist
Mailing Address Line 1:Pump Station 3	Mailing Address Line 1: APSC
Mailing Address Line 2 P.O.Box 196660	Mailing Address Line 2 P.O. Box 196660, MS 507
City: Anchorage State: AK Zip Code: 99519-6660	City: Anchorage State: AK Zip Code: 99519-6660
Phone: 907 787-4402 Email Mark.Dahl@Alyeska-Pipeline.com/Tim.Jones@Alyeska-Pipeline.com	Phone: 907 787-5871 Email: Alice.Joseph@alyeska-pipeline.com
Permit Contact:	***Person or Firm that Prepared Application:***
Name/Title: Don Mark Anthony/Air Quality SME	Name/Title: Keith Quincey/Senior Consultant
Mailing Address Line 1: APSC	Mailing Address Line 1:
Mailing Address Line 2 P.O. Box 196660, MS 507	Mailing Address Line 2
City: Anchorage State: AK Zip Code: 99519-6660	City: State: Zip Code:
Phone: 907 787-8568 Email: markanthonydt@alyeska-pipeline	Phone: 907 360-1171 Email: KeithAQA@hotmail.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): Klinton D. VanWingerden Title: Operations Director

X Signature (blue ink): Date: 10/28/2020

Form A2
Stationary Source Description

FORM A2
Stationary Source Description

Permit Number: AQ0074TVP03

1.	Stationary Source Description (a thorough description of the stationary source, its processes, raw materials, operating scenarios, and other specific information that may be necessary to determine the applicability of Title V requirements.) The information may include property area or map, number of employees, maximum capacity, and other primary emission-generating activities co-located or on adjacent properties. As described in the current operating permit statement of basis, the stationary source is a crude oil pumping facility which uses natural gas primarily and diesel fuel as an emergency back-up fuel in most of the equipment.	
2.	Nonattainment area [yes/no; if yes, specify]	No
3.	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 A2 instructions for this item]	No
4.	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

5. Attach plot plan.

6. Attach regional map.

7. Attach USGS map.

Form A2
Attachments

See Aerial Map: 50,51,52,53,54,55,56

C-Plan Map: 12

The mapped information is for response planning overview purposes and not a source for the site's legal description.

PLMP100
121-APL-1A
DHMP316
DHMP315
CS2-5
121-APL-1
CS2-6
DHMP314
CS2-6A
120-AMS-2B
CS2-7
DHMP313
CS2-8
DHMP312
Block Valve BL 1
120-APS-3
Pump Station 3
Block Valve BL 2
120-AMS-1A
PLMP105
DHMP311
DHMP310
DHMP309
DHMP308
DHMP307
Check Valve #22
CS3-3

Polygon Creek
Climb Creek
Dennis Creek
Oksrukuyik Creek
Sagavanirktok River
Ribdon River
Kakuktukruich Bluff

Toolik/Kuparuk Rivers Contingency Area

Sagavanirktok River 2 Contingency Area

Sagavanirktok River 3 Contingency Area

149°10'0"W 149°5'0"W 149°0'0"W 148°55'0"W 148°50'0"W 148°45'0"W 148°40'0"W

68°50'0"N

N

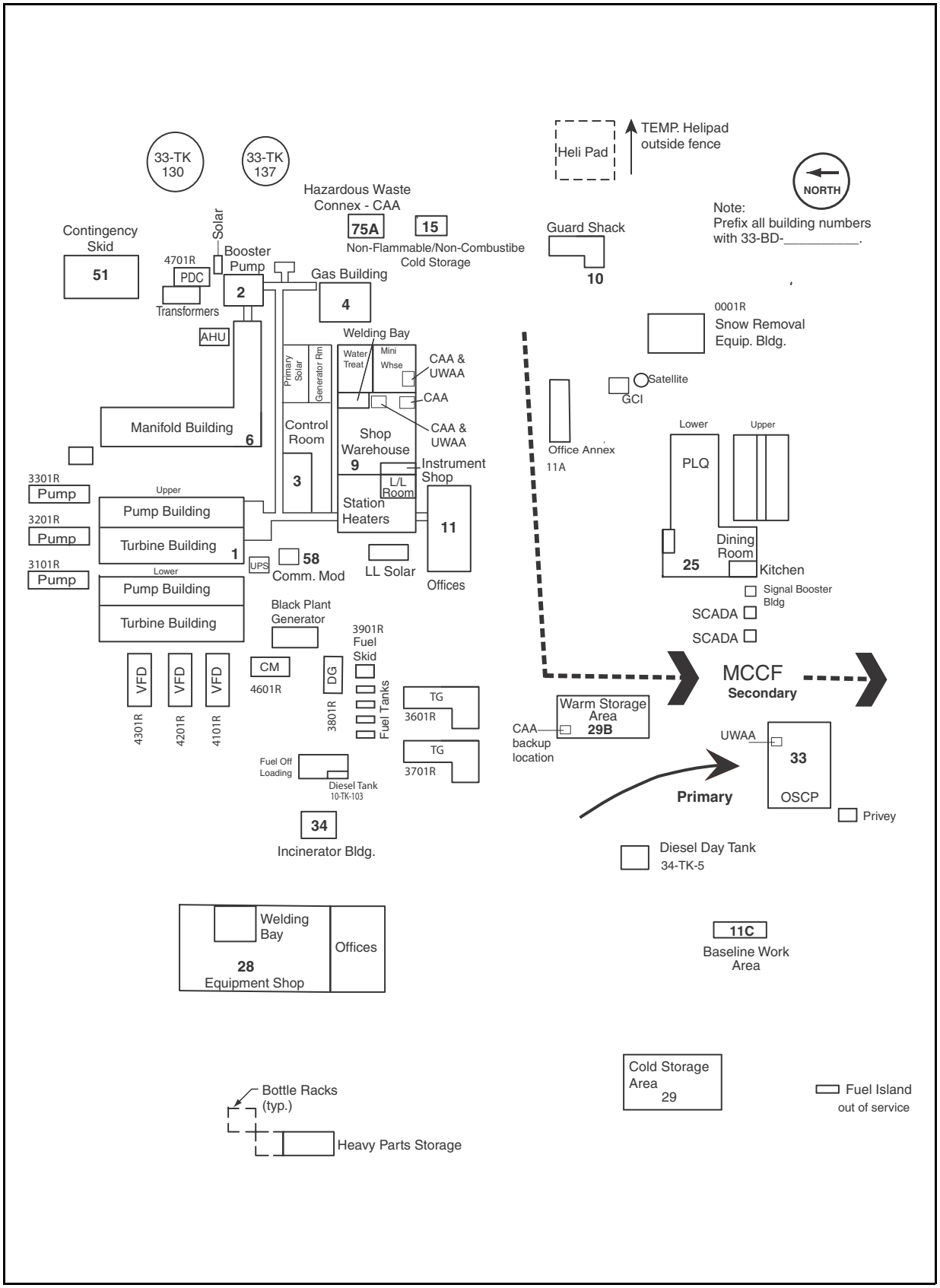
Miles 0 1 2 3 4 5

Elevation in feet

Vicinity

11W 11 12W 12 13W 13

Figure 1. Pump Station Plot Plan



Form A3
Operating Scenario Description

FORM A3
Operating Scenario Description

Permit Number: AQ0074TVP03

1.	Operating scenario ID	1
2.	Operating scenario description: Base operating scenario is consistent with purpose of Pump Station 3. Emission units involved and pollutants emitted are those identifed in this application. No seasonal variation, 8,760 hr/yr base operating scenario. No alternative operating scenarios identifed.	
3.	List the emissions units involved in this operating scenario.	All units. See above.
4.	Operating schedule: hours/day	24
	days/week	7
	weeks/year	52
5.	Seasonal variation (%): December - February	None
	March – May	None
	June - August	None
	September - November	None

6. Attach process flow diagram

Form A4
Title V Operating Permit Renewal Application Information

FORM A4

Title V Air Operating Permit Renewal Application Information

Permit Number: AQ0074TVP03

1.	Permit Contact: Name	See Form A1.
	Title	See Form A1.
	Mailing Address Line 1	See Form A1.
	Mailing Address Line 2	See Form A1.
	Phone Number	See Form A1.
	Email	See Form A1.
2.	Were there any changes to stationary source General Information (Form A1)? If yes, complete and submit a Form A1.	Yes, see 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]	See above.
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]	See above.
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]	Yes
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.
12.	Are there any requested changes in the assessable	No.

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

FORM A4

Title V Air Operating Permit Renewal Application Information

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.

Klinton D. VanWingerden	Operations Director
Name of Responsible Official	**Title**
	10/28/2020
Signature (blue ink)	**Date**

Form A4 Attachment
Compliance Certification

Compliance Certification
Permit AQ0074TVP03/Applicable Requirements
Pump Station 3

Permit Condition		In Compliance?	Method Used to Determine Status	Comments on Condition, Compliance Method or Compliance Status
No(s).	**Summary/Description**			
Section 3 State Requirements				
1	Visible Emissions Standards - EU 11-13, 15, 16, 18-21, and 27	Yes	Monitoring conducted under Condition 2, and reasonable inquiry.	For EU 11-13, 21 and 27, compliance based on reasonable inquiry. For EU 18, compliance status based on firing gas as primary fuel, and reasonable inquiry when firing liquid fuel. EU 15, 16, and 20 had actual emissions less than the thresholds in 18 AAC 50.326(e), compliance based on reasonable inquiry. EU 19 burned only gas as fuel.
2-4	Visible Emissions Standards MR&R	Yes	Reasonable inquiry/records.	MR&R conducted as required at time of signature.
5	Particulate Matter Emissions Standard - 11-13, 15, 16, 18-21, and 27	Yes	Monitoring conducted under Condition 2, and reasonable inquiry.	Compliance based on demonstration for VE standard.
6-7	Particulate Matter Emissions Standards MR&R	Yes	Reasonable inquiry/records.	MR&R conducted as required at time of signature.
8	Visible Emissions & Particulate Matter Emissions Standards MR&R – EU 18 only	Yes	Reasonable inquiry/records.	EU 18 operated less than 400 hr/yr on liquid fuel at time of signature.
9	Sulfur Compound Emissions Standard – EU 11-13, 15, 16, 18-21, and 27	Yes	Monitoring conducted under Conditions 10 and 12.	Fuel gas contained 150 ppmv or less H_2S. Liquid fuel contained less than 0.2 wt% sulfur.

Compliance Certification
Permit AQ0074TVP03/Applicable Requirements
Pump Station 3

Permit Condition		In Compliance?	Method Used to Determine Status	Comments on Condition, Compliance Method or Compliance Status
No(s).	Summary/Description			
10-11	Sulfur Compound Emissions Standard MR&R – Liquid Fuel	Yes	Reasonable inquiry/records.	MR&R conducted as required, records maintained.
12-14	Sulfur Compound Emissions Standard MR&R – Gaseous Fuel	Yes	Reasonable inquiry/records.	MR&R conducted as required, records maintained.
15	Operational Limits – EU 11-12	Yes	Monitoring records under Condition 15.1.	EU 11-12 complied with operational limits at time of signature.
15.1-15.3	Operational Limits MR&R	Yes	Reasonable inquiry/records.	All MR&R conducted as required, records maintained.
16	Operational Limits – EU 13	Yes	Monitoring records under Condition 16.1.	EU 13 complied with operational limits at time of signature.
16.1-16.3	Operational Limits MR&R	Yes	Reasonable inquiry/records.	All MR&R conducted as required, records maintained.
17 (17.1-17.2)	Fuel Use & Operational Limits – EU 15-16	Yes	Monitoring records under Condition 17.3.	EU 15-16 complied with fuel use and operational limits at time of signature.
17.3-17.5	Fuel Use & Operational Limits MR&R	Yes	Reasonable inquiry/records.	All MR&R conducted as required, records maintained.

Compliance Certification
Permit AQ0074TVP03/Applicable Requirements
Pump Station 3

Permit Condition		In Compliance?	Method Used to Determine Status	Comments on Condition, Compliance Method or Compliance Status
No(s).	**Summary/Description**			
18	Stationary Source Fuel Sulfur Limits and MR&R	Yes	Monitoring conducted under Conditions 18.1.a and 18.2.a.	Sulfur content of fuels burned less than limits at time of signature. MR&R conducted as required in Conditions 18.1 and 18.2.
19	Operational Limits – EU 18, 20, and 21	Yes	Monitoring records under Condition 19.1.	EU 18, 20, and 21 complied with the operational limits in Table B at time of signature.
19.1-19.6	Operational Limits MR&R (and Stack Requirements)	Yes	Reasonable inquiry/records.	All MR&R conducted as required, records maintained. Stacks maintained as required under Conditions 19.5 and 19.6.
20 (20.2)	CO Emissions Limit – EU 18 and 19	Yes	Monitoring records under Condition 19.1, and monitoring conducted under Conditions 20.4-20.5.	EU 18 and 19 complied with operational limits in Table B, the load-based operating limits in Condition 20.2 and the intake temperature limit in Condition 20.3 at time of signature.
20.4-20.9	Operational Limits MR&R	Yes	Reasonable inquiry/records.	All MR&R conducted as required, records maintained.
21	NOx Emissions Limit – EU 18, 20, and 21	Yes	Monitoring records under Condition 19.1.	EU 18, 20, and 21 complied with operational limits in Table B at time of signature.
21.1-21.2	NOx Emissions Limit MR&R	Yes	Reasonable inquiry/records.	All MR&R conducted as required, records maintained.

Compliance Certification
Permit AQ0074TVP03/Applicable Requirements
Pump Station 3

Permit Condition		In Compliance?	Method Used to Determine Status	Comments on Condition, Compliance Method or Compliance Status
No(s).	**Summary/Description**			
22	SO_2 Emissions Limit – EU 18, 20, and 21	Yes	Monitoring records under Conditions 18 and 19.	EU 18, 20, and 21 complied with operational limits in Table B and the fuel sulfur limits in Condition 18 at time of signature.
22.1	SO_2 Emissions Limit MR&R	Yes	Reasonable inquiry/records.	All MR&R under Conditions 18 and 19 conducted as required, records maintained.
23	Tank 130 HAP Emissions ORL – EU 26	Yes	Monitoring and recordkeeping conducted under Conditions 23.1 and 23.2.	EU 26 HAP emissions less than the limits in Condition 19 at time of signature.
23.1-23.2	Tank 130 HAP Emissions ORL MR&R	Yes	Reasonable inquiry/records.	All MR&R under Conditions 23.1 and 23.2 conducted as required, records maintained.
24	Operating Hours Limit – EU 27	Yes	Monitoring records under Conditions 24.1.b and 24.1.c.	EU 27 operation less than the limit in Condition 24 at time of signature.
25	Insignificant Emission Unit Requirements	Yes	Reasonable inquiry.	Compliance with applicable emission standards based on reasonable inquiry. No insignificant EU had actual emissions greater than the thresholds in 18 AAC 50.326(e).
Section 4 Federal Requirements				
26	NSPS Subpart A Notification Requirements	Yes	Reasonable inquiry/records.	No notifications required at time of signature.

Compliance Certification
Permit AQ0074TVP03/Applicable Requirements
Pump Station 3

Permit Condition		In Compliance?	Method Used to Determine Status	Comments on Condition, Compliance Method or Compliance Status
No(s).	Summary/Description			
27	NSPS Subpart A Startup, Shutdown, Malfunction Requirements – EU 18 and 19	Yes	Reasonable inquiry/records.	Operation records are maintained electronically in Alyeska's data logger system and in the daily operator logs.
28-29	NSPS Subpart A Excess Emissions and Monitoring Systems Performance Reports – EU ID 18	Yes	Reasonable inquiry/records.	Subpart A report for operation on diesel fuel filed as required.
30	NSPS Subpart A Performance Tests	Yes	Reasonable inquiry.	No performance tests required by EPA at time of signature.
31	NSPS Subpart A Good Air Pollution Control Practice – EU 18 and 19	Yes	Reasonable inquiry/records.	Complied with the routine maintenance procedures at time of signature. The units do not have an air pollution control device.
32	NSPS Subpart A Credible Evidence	Yes	Reasonable inquiry.	Credible evidence is not a Part 70/71 applicable requirement.
33	NSPS Subpart A Concealment of Emissions	Yes	Reasonable inquiry.	EU 18 and 19 operate with a positive pressure stack, eliminating potential dilution. Stacks in good condition.
34 (34.1 and 34.2)	NSPS Subpart GG NO_X Emissions Standard – EU 18 and 19	Yes	Monitoring conducted under Condition 34.3.	Most recent periodic testing results indicate compliance with the standard.

Compliance Certification
Permit AQ0074TVP03/Applicable Requirements
Pump Station 3

Permit Condition		In Compliance?	Method Used to Determine Status	Comments on Condition, Compliance Method or Compliance Status
No(s).	**Summary/Description**			
34.3-34.5	NSPS Subpart GG NO_X Emissions MR&R	Yes	Reasonable inquiry/records.	MR&R conducted as required at time of signature. No load restrictions apply under Condition 34.2.c.
35 (35.1)	NSPS Subpart GG SO_2 Emissions Standard – EU 18 and 19	Yes	Monitoring under Condition 35.2.	Fuels combusted contained less than 0.8% sulfur by weight.
35.2-35.4	NSPS Subpart GG SO_2 Emissions Standard MR&R	Yes	Reasonable inquiry/records.	Liquid fuel sampling conducted as required. Fuel gas meets definition of natural gas, no monitoring required. Records maintained.
36 (36.1)	NSPS Subpart A Requirements – EU 27	Yes	Reasonable inquiry.	Alyeska complied with Subpart A requirements as applicable to EU 27 at time of signature.
37 (37.1)	NSPS Subpart IIII Emissions Standards – EU 27	Yes	Compliance requirements under Condition 39.4.	EU 27 was certified by the manufacturer to the emission standards in Condition 37.1.
38 (38.1)	NSPS Subpart IIII Fuel Requirements – EU 27	Yes	Reasonable inquiry/records.	EU 27 burns only ULSD as fuel.
39	NSPS Subpart IIII Compliance Requirements	Yes	Reasonable inquiry/records.	Alyeska complied with Condition 39.1-39.4.
40	NSPS Subpart IIII Test Methods and Other Procedures	Yes	Reasonable inquiry.	No performance test conducted at time of signature.

Compliance Certification
Permit AQ0074TVP03/Applicable Requirements
Pump Station 3

Permit Condition		In Compliance?	Method Used to Determine Status	Comments on Condition, Compliance Method or Compliance Status
No(s).	Summary/Description			
41 (41.1)	NESHAP Subpart A Requirements – EU 15, 16, 20, 21 and 27	Yes	Reasonable inquiry.	Alyeska complied with Subpart A requirements as applicable at time of signature.
42	NESHAP Subpart ZZZZ Requirements – EU 27	Yes	Reasonable inquiry.	See NSPS Subpart IIII compliance under Conditions 36-40.
43	NESHAP Subpart ZZZZ Requirements – EU 15, 16, 20, and 21	See below	See below.	See compliance under Conditions 43.1-43.9.
43.1	NESHAP Subpart ZZZZ Management Practices for Emergency Engines – EU 15, 16, and 20	Yes	Reasonable inquiry/records.	Alyeska met the management (maintenance) requirements in Condition 43.1.
43.2	NESHAP Subpart ZZZZ Management Practices for Non-Emergency Engines – EU 21	Yes	Reasonable inquiry/records.	Alyeska met the management (maintenance) requirements in Condition 43.2.
43.3	NESHAP Subpart ZZZZ Good Air Pollution Control Practices – EU 15, 16, 20 and 21	Yes	Reasonable inquiry/records.	Alyeska met the GAPCP requirements in Conditions 43.3.

Compliance Certification
Permit AQ0074TVP03/Applicable Requirements
Pump Station 3

Permit Condition		In Compliance?	Method Used to Determine Status	Comments on Condition, Compliance Method or Compliance Status
No(s).	Summary/Description			
43.4	NESHAP Subpart ZZZZ Operation and Maintenance Requirements – EU 15, 16, 20 and 21	Yes	Reasonable inquiry/records.	Alyeska met the requirements in Conditions 43.4.a-c.
43.5	NESHAP Subpart ZZZZ Oil Analysis Program – EU 15, 16, 20 and 21	Yes	Reasonable inquiry/records.	Alyeska met the requirements of the oil analysis program at time of signature.
43.6	NESHAP Subpart ZZZZ Operating Limits for Emergency Engines – EU 15, 16, and 20	Yes	Monitoring records required under Condition 43.8.a.	Alyeska met the emergency engine operating limitations in Condition 43.6.
43.7-43.9	NESHAP Subpart ZZZZ MR&R Requirements	Yes	Reasonable inquiry/records.	Alyeska met the requirements in Condition 43.7-43.9 as applicable at time of signature.
44	Asbestos NESHAP	Yes	Reasonable inquiry/records.	Alyeska complied with the requirements of 40 CFR 61.145, 61.150, 61.152, Subpart M and applicable sections of Subpart A and Appendix A as triggered at time of signature.
45	Protection of Stratospheric Ozone 40 CFR 82 Subparts F, G and H	Yes	Reasonable inquiry/records.	Alyeska complied with the recycling and emissions reduction requirements in Subpart F, and the applicable prohibitions in Subpart G and Subpart H.
46	NESHAP Applicability Determinations	Yes	Reasonable inquiry.	Any required NESHAP applicability determination records maintained as necessary at time of signature.

Compliance Certification
Permit AQ0074TVP03/Applicable Requirements
Pump Station 3

Permit Condition		In Compliance?	Method Used to Determine Status	Comments on Condition, Compliance Method or Compliance Status
No(s).	**Summary/Description**			
47	NSPS and NESHAP Reports	Yes	Reasonable inquiry/records.	No reports submitted under 40 CFR 60, 61 or 63 at time of signature. Under Condition 47.2, no request by ADEC during the reporting period for any EPA-granted waivers.
Section 5 General Conditions				
48-50	Standard Terms and Conditions	Yes	Reasonable inquiry.	No comments.
51	Administration Fees	Yes	Reasonable inquiry/records.	Fees paid as required.
52-53	Assessable Emissions Estimates	Yes	Reasonable inquiry/records.	Records document that most recent emission fee estimates were submitted to ADEC and the emission fees paid.
54	Good Air Pollution Control Practices – EU 26	Yes	Reasonable inquiry/records.	For EU 26 conducted regular maintenance at time of signature.
55	Dilution Prohibition	Yes	Reasonable inquiry.	Equipment have positive pressure stacks, eliminating potential dilution. Stacks are in good condition
56	Reasonable Precautions to Prevent Fugitive Dust	Yes	Reasonable inquiry.	Precautions taken as needed during the reporting period. No complaints received during the reporting period.
57	Stack Injection Prohibition	Yes	Reasonable inquiry.	Only products of combustion or process emissions were released from applicable stacks.

Compliance Certification
Permit AQ0074TVP03/Applicable Requirements
Pump Station 3

Permit Condition		In Compliance?	Method Used to Determine Status	Comments on Condition, Compliance Method or Compliance Status
No(s).	**Summary/Description**			
58	Air Pollution Prohibited	Yes	Reasonable inquiry/records.	No complaints were received at time of signature.
58.1-58.5	Air Pollution Prohibited MR&R	Yes	Reasonable inquiry/records.	No complaints were received; no MR&R triggered at time of signature.
59	Technology-Based Emission Standard Excess Emissions Requirements	Yes	Reasonable inquiry.	No unavoidable excess emissions occurred at time of signature.
60	Open Burning Requirements	Yes	Reasonable inquiry/records.	No open burning conducted at time of signature.
Section 6 General Source Testing and Monitoring Requirements				
61-70	Source Tests Requirements and Methods	Yes	Reasonable inquiry/records.	Most recent source tests complied with test requirements and methods as required.
Section 7 General Recordkeeping and Reporting Requirements				
71	General Recordkeeping Requirements	Yes	Reasonable inquiry/records.	Records maintained as required under specific conditions of permit.
72	Certification of Documents	Yes	Reasonable inquiry/records.	Alyeska certified all items subject to 18 AAC 50.205 submitted to the ADEC at time of signature.
73-74	Submittals and Information Requests	Yes	Reasonable inquiry/records.	Alyeska addressed submittals as required at time of signature. Information requests, if any, submitted in timely manner.

Compliance Certification
Permit AQ0074TVP03/Applicable Requirements
Pump Station 3

Permit Condition		In Compliance?	Method Used to Determine Status	Comments on Condition, Compliance Method or Compliance Status
No(s).	**Summary/Description**			
75	Excess Emissions and Permit Deviation Reports	Yes	Reasonable inquiry/records.	Permit Deviation and Excess Emission Reports filed as required.
76	Operating Reports	Yes	Reasonable inquiry/records.	Records document that operating reports were submitted to ADEC in a timely manner, and were consistent with the requirements of Conditions 76.1-76.4.
77	Annual Compliance Certification	Yes	Reasonable inquiry/records.	Most recent Annual Compliance Certification Report submitted as required.
78	Emissions Inventory Reporting	Yes	Reasonable inquiry/records.	Most recent emissions report submitted as required.
Section 8 Permit Changes and Renewal				
79	Permit Applications and Submittals to EPA	Yes	Reasonable inquiry/records.	EPA copied as required.
80	Emissions Trading	Yes	Reasonable inquiry.	PS 3 does not engage in emissions trading.
81	Off Permit Changes	Yes	Reasonable inquiry/records.	No off permit changes made at time of signature.
82	Operational Flexibility	Yes	Reasonable inquiry/records.	No operational flexibility changes made at time of signature.

Compliance Certification
Permit AQ0074TVP03/Applicable Requirements
Pump Station 3

Permit Condition		In Compliance?	Method Used to Determine Status	Comments on Condition, Compliance Method or Compliance Status
No(s).	**Summary/Description**			
83	Permit Renewal	Yes	Reasonable inquiry.	This renewal application submitted in a timely manner.
Section 9 General Compliance Requirements				
84-88	General Compliance Requirements	Yes	Reasonable inquiry.	No comments.

Notes:

1. "Reasonable inquiry" may include but is not limited to process or operator knowledge; routine procedures; current and historical observations; and review of files, monitoring records or reports.
2. The description of compliance status indicates whether the stationary source was in compliance at the time of this certification. For the description of compliance status below, a "yes" means that Alyeska certifies that it was in compliance at the time of this certification and that it believes it will continue to comply. A "no" means that the stationary source was either not in compliance at the time of the application or that it will not be able to achieve continuous compliance with the current permit.
3. As required by 40 CFR 71.5(c)(8)(ii)(A) and (iii)(A), Alyeska hereby states that the stationary source, Pump Station 3, will continue to comply with applicable requirements with which the source is in compliance.

Form Series B

Form B
Emission Unit Listing For This Application

FORM B

Emission Unit Listing For This Application

Permit Number: AQ0074TVP03

EMISSION UNIT LISTING: New, Modified, Previously Unpermitted, Replaced, Deleted					
Emission Unit ID Number	Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date	Notes
Emission Units To Be ADDED By This Application (New, Previously Unpermitted, or Replacement)					
Emission Units To Be MODIFIED By This Application					
Emission Units To Be DELETED By This Application					

FORM B

Emission Unit Listing For This Application

SIGNIFICANT EMISSION UNIT LISTING: Title V permitted emission units that have not been modified				
Emission Unit ID Number	Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date
11	N/A	Weil McClain Boiler	1.7 MMBtu/hr	1994
12	N/A	Weil McClain Boiler	1.7 MMBtu/hr	1994
13	N/A	Applied Air Systems Heater	2.8 MMBtu/hr	Post-1980
15	T105	Detroit Diesel Engine Electric Generator, Series Model #8123	425 kW	1994
16	T106	Cummins Engine, Model #NTA855-G3	399 kW	1997
18	33-PK-3701R	Siemens Cyclone Turbine Electric Generator, PK Model #SGT-400	12.9 MW ISO_4	2005
19	33-PK-3601R	Siemens Cyclone Turbine Electric Generator, PK Model #SGT-400	12.9 MW ISO_4	2005
20	33-GEN-3801R	Caterpillar 3516B Engine Electric Generator	2,250 kW	2005
21	33-GEN-4605R	UPS Electric Generator, PK Model #PPJD65MOD-1	65 kW	2005
26	TK-130	Breakout Tank 130	150,000 bbl	Pre-1978
27	33-GEN-4401	MTU Detroit Electric Generator Engine	800 kWe	2011

INSIGNIFICANT EMISSION UNIT LISTING: Insignificant Title V permitted emission units that have not been modified

FORM B

Emission Unit Listing For This Application

Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date	Basis for Insignificant Status
	Burnham PLQ Heater (2)	0.76 MMBtu/hr		18 AAC 50.326(g)(5)
	Turbo Heater	0.20 MMBtu/hr		18 AAC 50.326(g)(5)
	Bock Heater	0.75 MMBtu/hr		18 AAC 50.326(g)(5)
	(8) Hastings Heaters	0.30 MMBtu/hr		18 AAC 50.326(g)(5)
	(2) Modine Heaters	0.30 MMBtu/hr		18 AAC 50.326(g)(5)
	Jackson/Church Heater	0.50 MMBtu/hr		18 AAC 50.326(g)(5)
	Hotsy Steam Cleaner	0.98 MMBtu/hr		18 AAC 50.326(g)(5)
	(9) Tioga Heaters	0.60 MMBtu/hr		18 AAC 50.326(g)(7)
	(2) Tioga Heaters	0.98 MMBtu/hr		18 AAC 50.326(g)(7)
	Chinook Heater	0.80 MMBtu/hr		18 AAC 50.326(g)(7)
	Aerotec Heater	0.40 MMBtu/hr		18 AAC 50.326(g)(7)

Form B1
Emission Unit Detail Form—External Combustion Equipment (Boilers and Heaters)

FORM B1

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	EU 11 and 12, Operating Scenario 1
2.	Date installation/construction commenced	1994
3.	Date installed	
4.	Emission Unit serial number	
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer	Weil McLain
7.	Description of emission unit, including type of boiler/heater and firing method: Internal fire tube boilers, diesel/natural gas continuous feed firing.	
8.	Rated design capacity (heat input, MMBtu/hr)	1.7 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	N/A
10.	Maximum steam pressure (psi)	N/A
11.	Maximum steam temperature (°F)	N/A

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

Fuel	Maximum hourly firing rate (specify units)
Diesel	12.7 gal/hr
Fuel Gas	1,769 scf/hr

13.	Is waste heat utilized for any purpose? If yes, describe: No.

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03 Condition 1	18 AAC 50.055(a)(1)	Visible Emissions	20% opacity	Yes	Permit AQ0074TVP03, Condition 1.1
AQ0074TVP03, Condition 5	18 AAC 50.055(b)(1)	Particulate Matter	0.05 gr/scf	Yes	Permit AQ0074TVP03, Condition 5.1
AQ0074TVP03, Condition 9	18 AAC 50.055(c)	Sulfur compound emissions	500 ppm	Yes	Permit AQ0074TVP03, Conditions 10 and 11
AQ0074TVP03, Condition 15	AQ0074CPT03	Owner Requested Limit	1,000 hr/yr liquid fuel use, combined total	Yes	Permit AQ0074TVP03, Conditions 15.1-15.3
AQ0074TVP03, Condition 18	Construction Permit AQ0074CPT03	ORL to Protect Ambient Air	150 ppmv H_2S limit in fuel gas 0.2 wt% S limit in liquid fuel	Yes	Permit AQ0074TVP03, Conditions 18.1 and 18.2

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
NESHAP for Industrial, Commercial, and Institutional Boilers at Area Sources. 40 CFR63 Subpart JJJJJJ	EU IDs 11 and 12 are exempt from the requirements of 40 CFR 63 Subpart JJJJJJ because the units are gas-fired [63.11195(e)]. It combusts diesel fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel, as is consistent with the definition of a gas-fired boiler under 63.11237.

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

FORM B1

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	EU ID 13 Operating Scenario 1.
2.	Date installation/construction commenced	Post-1980
3.	Date installed	
4.	Emission Unit serial number	
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer	Applied Air Systems
7.	Description of emission unit, including type of boiler/heater and firing method: forced air heater	
8.	Rated design capacity (heat input, MMBtu/hr)	2.8 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	N/A
10.	Maximum steam pressure (psi)	N/A
11.	Maximum steam temperature (°F)	N/A

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

Fuel	Maximum hourly firing rate (specify units)
Diesel	20.9 gal/hr
Natural Gas	2,913 scf/hr (based on maximum rated heat input capacity)

13.	Is waste heat utilized for any purpose? If yes, describe: No.

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03 Condition 1	18 AAC 50.055(a)(1)	Visible Emissions	20% opacity	Yes	Permit AQ0074TVP03, Condition 1.1
AQ0074TVP03, Condition 5	18 AAC 50.055(b)(1)	Particulate Matter	0.05 gr/scf	Yes	Permit AQ0074TVP03, Condition 5.1
AQ0074TVP03, Condition 9	18 AAC 50.055(c)	Sulfur compound emissions	500 ppm	Yes	Permit AQ0074TVP03, Condition 10
AQ0074TVP03, Condition 16	Construction Permit AQ0074CPT03	Owner Requested Limit	500 hours per year	Yes	Permit AQ0074TVP03, Conditions 16.1-16.3
AQ0074TVP03, Condition 18	Construction Permit AQ0074CPT03	ORL to Protect Ambient Air	150 ppmv H_2S limit in fuel gas 0.2 wt% S limit in liquid fuel	Yes	Permit AQ0074TVP03, Conditions 18.1 and 18.2

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

FORM B1

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	NA-Insignificant Emission Units
2.	Date installation/construction commenced	
3.	Date installed	
4.	Emission Unit serial number	
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer	Burnham
7.	Description of emission unit, including type of boiler/heater and firing method: Forced air, gas-fired heater (2)	
8.	Rated design capacity (heat input, MMBtu/hr)	0.76 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	N/A
10.	Maximum steam pressure (psi)	N/A
11.	Maximum steam temperature (°F)	N/A

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

Fuel	Maximum hourly firing rate (specify units)
Fuel Gas	Fuel throughput combined for all IEU heaters. See D form series for emission calculation methods.

13.	Is waste heat utilized for any purpose? If yes, describe: No.

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03, Condition 25	18 AAC 50.050(a), 50.055(a)(1), and 50.055(b)(1)	Insignificant Emission Units: Industrial processes and fuel-burning equipment	Opacity, PM, and sulfur standards as described in current permit	Yes	Permit AQ0074TVP03, Conditions 25.1-25.4

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

FORM B1

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	NA-Insignificant Emission Units
2.	Date installation/construction commenced	
3.	Date installed	
4.	Emission Unit serial number	
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer	Turbo Heater
7.	Description of emission unit, including type of boiler/heater and firing method: Space Heater	
8.	Rated design capacity (heat input, MMBtu/hr)	0.2 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	N/A
10.	Maximum steam pressure (psi)	N/A
11.	Maximum steam temperature (°F)	N/A

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

Fuel	Maximum hourly firing rate (specify units)
Fuel Gas	Fuel throughput combined for all IEU heaters. See D form series for emission calculation methods.

13.	Is waste heat utilized for any purpose? If yes, describe: No.

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03, Condition 25	18 AAC 50.050(a), 50.055(a)(1), and 50.055(b)(1)	Insignificant Emission Units: Industrial processes and fuel-burning equipment	Opacity, PM, and sulfur standards as described in current permit	Yes	Permit AQ0074TVP03, Conditions 25.1-25.4

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

FORM B1

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	N/A - Insignificant Emission Unit
2.	Date installation/construction commenced	
3.	Date installed	
4.	Emission Unit serial number	
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer	Bock
7.	Description of emission unit, including type of boiler/heater and firing method: Hot water heater, fuel gas-fired.	
8.	Rated design capacity (heat input, MMBtu/hr)	0.75 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	N/A
10.	Maximum steam pressure (psi)	N/A
11.	Maximum steam temperature (°F)	N/A

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

Fuel	Maximum hourly firing rate (specify units)
Fuel gas	Fuel throughput combined for all IEU heaters. See D form series for emission calculation methods.

13.	Is waste heat utilized for any purpose? If yes, describe: No.

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03, Condition 25	18 AAC 50.050(a), 50.055(a)(1), and 50.055(b)(1)	Insignificant Emission Units: Industrial processes and fuel-burning equipment	Opacity, PM, and sulfur standards as described in current permit	Yes	Permit AQ0074TVP03, Conditions 25.1-25.4

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
40 CFR 63 Subpart JJJJJJ: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources	The IEU heater is exempt from the requirements of 40 CFR 63 Subpart JJJJJJ because the unit is gas-fired [63.11195(e)].

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

FORM B1

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	NA-Insignificant Emission Units
2.	Date installation/construction commenced	
3.	Date installed	
4.	Emission Unit serial number	
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer	Hastings
7.	Description of emission unit, including type of boiler/heater and firing method: Space Heaters (8)	
8.	Rated design capacity (heat input, MMBtu/hr)	0.30 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	N/A
10.	Maximum steam pressure (psi)	N/A
11.	Maximum steam temperature (°F)	N/A

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

Fuel	Maximum hourly firing rate (specify units)
Fuel Gas	Fuel throughput combined for all IEU heaters. See D form series for emission calculation methods.

13.	Is waste heat utilized for any purpose? If yes, describe: No.

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03, Condition 25	18 AAC 50.050(a), 50.055(a)(1), and 50.055(b)(1)	Insignificant Emission Units: Industrial processes and fuel-burning equipment	Opacity, PM, and sulfur standards as described in current permit	Yes	Permit AQ0074TVP03, Conditions 25.1-25.4

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

FORM B1

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	NA-Insignificant Emission Units
2.	Date installation/construction commenced	
3.	Date installed	
4.	Emission Unit serial number	
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer	Modine
7.	Description of emission unit, including type of boiler/heater and firing method: Space Heater (2)	
8.	Rated design capacity (heat input, MMBtu/hr)	0.3 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	N/A
10.	Maximum steam pressure (psi)	N/A
11.	Maximum steam temperature (°F)	N/A

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

Fuel	Maximum hourly firing rate (specify units)
Fuel Gas	Fuel throughput combined for all IEU heaters. See D form series for emission calculation methods.

13.	Is waste heat utilized for any purpose? If yes, describe: No.

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03, Condition 25	18 AAC 50.050(a), 50.055(a)(1), and 50.055(b)(1)	Insignificant Emission Units: Industrial processes and fuel-burning equipment	Opacity, PM, and sulfur standards as described in current permit	Yes	Permit AQ0074TVP03, Conditions 25.1-25.4

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

FORM B1

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	NA-Insignificant Emission Units
2.	Date installation/construction commenced	
3.	Date installed	
4.	Emission Unit serial number	
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer	Jackson & Church
7.	Description of emission unit, including type of boiler/heater and firing method: Space Heater	
8.	Rated design capacity (heat input, MMBtu/hr)	0.5 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	N/A
10.	Maximum steam pressure (psi)	N/A
11.	Maximum steam temperature (°F)	N/A

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

Fuel	Maximum hourly firing rate (specify units)
Fuel Gas	Fuel throughput combined for all IEU heaters. See E form series for emission calculation methods.

13.	Is waste heat utilized for any purpose? If yes, describe: No.

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03, Condition 25	18 AAC 50.050(a), 50.055(a)(1), and 50.055(b)(1)	Insignificant Emission Units: Industrial processes and fuel-burning equipment	Opacity, PM, and sulfur standards as described in current permit	Yes	Permit AQ0074TVP03, Conditions 25.1-25.4

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

FORM B1

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

Permit Number: AQ0074TP03

1.	Emission Unit ID Number // Operating Scenario	NA-Insignificant Emission Units
2.	Date installation/construction commenced	
3.	Date installed	
4.	Emission Unit serial number	
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer	Hotsy
7.	Description of emission unit, including type of boiler/heater and firing method: Steam Cleaning Unit	
8.	Rated design capacity (heat input, MMBtu/hr)	0.98 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	N/A
10.	Maximum steam pressure (psi)	N/A
11.	Maximum steam temperature (°F)	N/A

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

Fuel	Maximum hourly firing rate (specify units)
Fuel gas	Fuel throughput combined for all IEU heaters. See D form series for emission calculation methods.

13.	Is waste heat utilized for any purpose? If yes, describe: No.

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03, Condition 25	18 AAC 50.050(a), 50.055(a)(1), and 50.055(b)(1)	Insignificant Emission Units: Industrial processes and fuel-burning equipment	Opacity, PM, and sulfur standards as described in current permit	Yes	Permit AQ0074TVP03, Conditions 25.1-25.4

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
40 CFR 63 Subpart JJJJJJ: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources	Steam cleaning unit is exempt from the requirements of 40 CFR 63 Subpart JJJJJJ because the unit is gas-fired [63.11195(e)].

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

FORM B1

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	NA-Insignificant Emission Units
2.	Date installation/construction commenced	
3.	Date installed	
4.	Emission Unit serial number	
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer	Tioga
7.	Description of emission unit, including type of boiler/heater and firing method: Space Heaters (9)	
8.	Rated design capacity (heat input, MMBtu/hr)	0.6 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	N/A
10.	Maximum steam pressure (psi)	N/A
11.	Maximum steam temperature (°F)	N/A

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

Fuel	Maximum hourly firing rate (specify units)
Diesel	Fuel throughput combined for all IEU heaters. See D form series for emission calculation methods.

13.	Is waste heat utilized for any purpose? If yes, describe: No.

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03, Condition 25	18 AAC 50.050(a), 50.055(a)(1), and 50.055(b)(1)	Insignificant Emission Units: Industrial processes and fuel-burning equipment	Opacity, PM, and sulfur standards as described in current permit	Yes	Permit AQ0074TVP03, Conditions 25.1-25.4

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

FORM B1

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	NA-Insignificant Emission Units
2.	Date installation/construction commenced	
3.	Date installed	
4.	Emission Unit serial number	
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer	Tioga
7.	Description of emission unit, including type of boiler/heater and firing method: Space Heaters (2)	
8.	Rated design capacity (heat input, MMBtu/hr)	0.98 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	N/A
10.	Maximum steam pressure (psi)	N/A
11.	Maximum steam temperature (°F)	N/A

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

Fuel	Maximum hourly firing rate (specify units)
Diesel	Fuel throughput combined for all IEU heaters. See D form series for emission calculation methods.

13.	Is waste heat utilized for any purpose? If yes, describe: No.

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03, Condition 25	18 AAC 50.050(a), 50.055(a)(1), and 50.055(b)(1)	Insignificant Emission Units: Industrial processes and fuel-burning equipment	Opacity, PM, and sulfur standards as described in current permit	Yes	Permit AQ0074TVP03, Conditions 25.1-25.4

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

FORM B1

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	NA-Insignificant Emission Units
2.	Date installation/construction commenced	
3.	Date installed	
4.	Emission Unit serial number	
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer	Chinook
7.	Description of emission unit, including type of boiler/heater and firing method: Space Heater	
8.	Rated design capacity (heat input, MMBtu/hr)	0.8 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	N/A
10.	Maximum steam pressure (psi)	N/A
11.	Maximum steam temperature (°F)	N/A

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

Fuel	Maximum hourly firing rate (specify units)
Diesel	Fuel throughput combined for all IEU heaters. See D form series for emission calculation methods.

13.	Is waste heat utilized for any purpose? If yes, describe: No.

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03, Condition 25	18 AAC 50.050(a), 50.055(a)(1), and 50.055(b)(1)	Insignificant Emission Units: Industrial processes and fuel-burning equipment	Opacity, PM, and sulfur standards as described in current permit	Yes	Permit AQ0074TVP03, Conditions 25.1-25.4

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

FORM B1

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	N/A - Insignificant Emission Unit
2.	Date installation/construction commenced	
3.	Date installed	
4.	Emission Unit serial number	
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer	Aerotec
7.	Description of emission unit, including type of boiler/heater and firing method: Space Heater	
8.	Rated design capacity (heat input, MMBtu/hr)	0.4 MMBtu/hr
9.	Maximum steam production rate (lbs/hr)	N/A
10.	Maximum steam pressure (psi)	N/A
11.	Maximum steam temperature (°F)	N/A

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

Fuel	Maximum hourly firing rate (specify units)
Diesel	Fuel throughput combined for all IEU heaters. See D form series for emission calculation methods.

13.	Is waste heat utilized for any purpose? If yes, describe: No.

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03, Condition 25	18 AAC 50.050(a), 50.055(a)(1), and 50.055(b)(1)	Insignificant Emission Units: Industrial processes and fuel-burning equipment	Opacity, PM, and sulfur standards as described in current permit	Yes	Permit AQ0074TVP02, Conditions 25.1-25.4

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

Form B2
Emission Unit Detail Form—Internal Combustion Equipment (Engines and Turbines)

FORM B2

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	EU ID 15, Operating Scenario 1
2.	Date installation/construction commenced[1]	1994
3.	Date installed	
4.	Emission Unit serial number	T105
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer and model number	Detroit Diesel Series Model #8123
7.	Type of combustion device	Diesel-fired Engine
8.	Rated design capacity (horsepower rating for engines)	
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	
10.	If used for power generation, electrical output (kW)	425 kW

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

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

Fuel	Maximum hourly firing rate (specify units)
Diesel Fuel	29.78 gallons/hr

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

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03 Condition 1	18 AAC 50.055(a)(1)	Visible emissions	20%	Yes	Permit AQ0074TVP03, Conditions 1.3 or 2-4
AQ0074TVP03, Condition 5	18 AAC 50.055(b)(1)	Particulate matter	0.05 gr/scf	Yes	Permit AQ0074TVP03, Condition 5.3
AQ0074TVP03, Condition 9	18 AAC 50.055(c)	Sulfur compound emissions	500 ppm	Yes	Permit AQ0074TVP03, Conditions 10 and 11
AQ0074TVP03, Condition 17	Permit-to-Operate No. 9572-AA010	Owner Requested Limit	110,000 gallons fuel, combined total for EU 15 and 16.	Yes	AQ0074TVP03, Conditions 17.3-17.5
AQ0074TVP03, Condition 18.2	Construction Permit AQ0074CPT03	ORL to Protect Ambient Air	0.2 wt% S limit in liquid fuel	Yes	Permit AQ0074TVP03, Condition 18.2
AQ0074TVP03, Condition 43	40 CFR 63 Subpart ZZZZ, specifically: 40 CFR 63.6603(a); 63.6605(a) and (b); 63.6625(e)(3), (f), (h), and (i). See Conditions 43.1-43.6.	Management practices, etc.	Requirements applicable to emergency engines located at an area source.	Yes	MR&R required under Subpart ZZZZ, specifically: 40 CFR 63.6640(a), (b), (e), and (f); 63.6650(f); 63.6655(e) and (f) 63.6660; 63.6665. See Conditions 43.7-43.9.

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

FORM B2

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	EU 16, Operating Scenario 1
2.	Date installation/construction commenced[1]	1997
3.	Date installed	
4.	Emission Unit serial number	T106
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer and model number	Cummins Engine Model #NTA855-G3
7.	Type of combustion device	Diesel-fired engine
8.	Rated design capacity (horsepower rating for engines)	
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	
10.	If used for power generation, electrical output (kW)	399 kW

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

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

Fuel	Maximum hourly firing rate (specify units)
Diesel Fuel	27.9 gallons/hr

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

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03 Condition 1	18 AAC 50.055(a)(1)	Visible emissions	20%	Yes	Permit AQ0074TVP03, Conditions 1.3 or 2-4
AQ0074TVP03, Condition 5	18 AAC 50.055(b)(1)	Particulate matter	0.05 gr/scf	Yes	Permit AQ0074TVP03, Condition 5.3
AQ0074TVP03, Condition 9	18 AAC 50.055(c)	Sulfur compound emissions	500 ppm	Yes	Permit AQ0074TVP03, Conditions 10 and 11
AQ0074TVP03, Condition 17	Permit-to-Operate No. 9572-AA010	Owner Requested Limit	110,000 gallons fuel, combined total for EU 15 and 16.	Yes	Permit AQ0074TVP03, Conditions 17.3-17.5
AQ0074TVP03, Condition 18.2	Construction Permit AQ0074CPT03	ORL to Protect Ambient Air	0.2 wt% S limit in liquid fuel	Yes	Permit AQ0074TVP03, Condition 18.2
AQ0074TVP03, Condition 43	40 CFR 63 Subpart ZZZZ, specifically: 40 CFR 63.6603(a); 63.6605(a) and (b); 63.6625(e)(3), (f), (h), and (i). See Conditions 43.1-43.6.	Management practices, etc.	Requirements applicable to emergency engines located at an area source.	Yes	MR&R required under Subpart ZZZZ, specifically: 40 CFR 63.6640(a), (b), (e), and (f); 63.6650(f); 63.6655(e) and (f) 63.6660; 63.6665. See Conditions 43.7-43.9.

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

FORM B2

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	EU 18, Operating Scenario 1
2.	Date installation/construction commenced[1]	2005
3.	Date installed	
4.	Emission Unit serial number	33-PK-3701R (tag number)
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer and model number	Siemens Cyclone PK Model #SGT-400
7.	Type of combustion device	Gas Turbine
8.	Rated design capacity (horsepower rating for engines)	
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	12.9 MW ISO (please include same footnote in Table A of current permit)
10.	If used for power generation, electrical output (kW)	

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

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

Fuel	Maximum hourly firing rate (specify units)
Diesel and Fuel Gas	128.78 MMBtu/hr (average hourly firing rate)

12.	Describe any specific modifications to the emission unit that must be addressed in the permit:

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03 Condition 1	18 AAC 50.055(a)(1)	Visible emissions	20%	Yes	Permit AQ0074TVP03, Conditions 1.2 or 2-4 (by way of Condition 8)
AQ0074TVP03, Condition 5	18 AAC 50.055(b)(1)	Particulate matter	0.05 gr/scf	Yes	Permit AQ0074TVP03, Condition 5.2 or 6-7 (by way of Condition 8)
AQ0074TVP03, Condition 9	18 AAC 50.055(c)	Sulfur compound emissions	500 ppm	Yes	Permit AQ0074TVP03, Conditions 10-14
AQ0074TVP03, Condition 18	Construction Permit AQ0074CPT03	ORL to Protect Ambient Air	150 ppmv H_2S limit in fuel gas 0.2 wt% S limit in liquid fuel	Yes	Permit AQ0074TVP03, Conditions 18.1 and 18.2
AQ0074TVP03, Condition 19	AQ0074MSS01	Owner Requested Limit: NOx, SO_2, PM-10	Operating Hour limits	Yes	Permit AQ0074TVP03, Conditions 19.1-19.6
AQ0074TVP03, Condition 20	AQ0074CPT03	Owner Requested Limit: CO	Calculated operating hour limit based on percent load	Yes	Permit AQ0074TVP03, Conditions 20.1-20.9
AQ0074TVP03, Condition 21	AQ0074MSS01	Owner Requested Limit: NOx	240 hours, 12 month rolling total hours	Yes	Permit AQ0074TVP03, Conditions 21.1-21.2
AQ0074TVP03, Condition 22	AQ0074MSS01	Owner Requested Limit: SO_2	240 hours, 12 month rolling total hours, 0.2 wt% S in diesel fuel or 150 ppmv H_2S in gas	Yes	Permit AQ0074TVP03, Condition 22.1

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03, Condition 27	40 CFR 60.7(b)	NSPS General Provisions	Maintain records of startup, shutdown, and malfunction of EU, control equipment, or monitoring device	Yes	NA. Compliance based upon reasonable inquiry.
AQ0074TVP03, Condition 28	40 CFR 60.7(c)	NSPS General Provisions	Submit EEMSP Report	Yes	Permit AQ0074TVP03, Conditions 28.1 through 28.2
AQ0074TVP03, Condition 29	40 CFR 60.7(d)	NSPS General Provisions	Submit Summary Report Form	Yes	Permit AQ0074TVP03, Conditions 29.1 through 29.2
AQ0074TVP03, Condition 31	40 CFR 60.11(d)	NSPS General Provisions	Good Air Pollution Control Practice	Yes	NA. Compliance based upon reasonable inquiry.
AQ0074TVP03, Conditions 34.1 and 34.2	40 C.F.R. 60.332(a)(2) & (d)	NSPS Subpart GG NOx Standard	Gas: 212 ppmv at 15% O_2 dry exhaust basis Diesel: 205 ppmv at 15% O_2 dry exhaust basis	Yes	Permit AQ0074TVP03, Conditions 34.3-34.5
AQ0074TVP03, Condition 35.1	40 C.F.R. 60.333(b)	NSPS Subpart GG Sulfur Standard	0.8 wt% S	Yes	Permit AQ0074TVP03, Conditions 35.2 through 35.4

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

FORM B2

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	EU 19, Operating Scenario 1
2.	Date installation/construction commenced[1]	2005
3.	Date installed	
4.	Emission Unit serial number	33-PK-3601R (tag number)
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer and model number	Siemens Cyclone PK Model #SGT-400
7.	Type of combustion device	Gas Turbine
8.	Rated design capacity (horsepower rating for engines)	
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	12.9 MW ISO (please include same footnote in Table A of current permit)
10.	If used for power generation, electrical output (kW)	

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

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

Fuel	Maximum hourly firing rate (specify units)
Fuel Gas	128.78 MMBtu/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit:

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03 Condition 1	18 AAC 50.055(a)(1)	Visible emissions	20%	Yes	Permit AQ0074TVP03, Condition 1.4
AQ0074TVP03, Condition 5	18 AAC 50.055(b)(1)	Particulate matter	0.05 gr/scf	Yes	Permit AQ0074TVP03, Condition 5.4
AQ0074TVP03, Condition 9	18 AAC 50.055(c)	Sulfur compound emissions	500 ppm	Yes	Permit AQ0074TVP03, Conditions 12-14
AQ0074TVP03, Condition 20	AQ0074CPT03	Owner Requested Limit: CO	Calculated operating hour limit based on percent load	Yes	Permit AQ0074TVP03, Conditions 20.1-20.9
AQ0074TVP03, Condition 27	40 CFR 60.7(b)	NSPS General Provisions	Maintain records of startup, shutdown, and malfunction of EU, control equipment, or monitoring device	Yes	NA. Compliance based upon reasonable inquiry.
AQ0074TVP03, Condition 31	40 CFR 60.11(d)	NSPS General Provisions	Good Air Pollution Control Practice	Yes	NA. Compliance based upon reasonable inquiry.
AQ0074TVP03, Condition 34.1	40 C.F.R. 60.332(a)(2) & (d)	NSPS Subpart GG NOx Standard	212 ppmv at 15% O_2 dry exhaust basis	Yes	Permit AQ0074TVP03, Conditions 34.3-34.5
AQ0074TVP03, Condition 35.1	40 C.F.R. 60.333(b)	NSPS Subpart GG Sulfur Standard	0.8 wt% S	Yes	Permit AQ0074TVP03, Conditions 35.2-35.4

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

FORM B2

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	EU ID 20, Operating Scenario 1
2.	Date installation/construction commenced[1]	2005
3.	Date installed	
4.	Emission Unit serial number	33-GEN-3801R (tag number)
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer and model number	Caterpillar 3516B
7.	Type of combustion device	Diesel-fired engine
8.	Rated design capacity (horsepower rating for engines)	
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	
10.	If used for power generation, electrical output (kW)	2,250 kW

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

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

Fuel	Maximum hourly firing rate (specify units)
Diesel Fuel	157.7 gallons/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit:

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03 Condition 1	18 AAC 50.055(a)(1)	Visible emissions	20%	Yes	Permit AQ0074TVP03, Conditions 1.3 or 2-4
AQ0074TVP03, Condition 5	18 AAC 50.055(b)(1)	Particulate matter	0.05 gr/scf	Yes	Permit AQ0074TVP03, Condition 5.3 or 6-7
AQ0074TVP03, Condition 9	18 AAC 50.055(c)	Sulfur compound emissions	500 ppm	Yes	Permit AQ0074TVP03, Conditions 10 and 11
AQ0074TVP03, Condition 18.2	AQ0074CPT03	Owner Requested Limit	0.2 wt% S limit in liquid fuel	Yes	Permit AQ0074TVP03, Conditions 18.2.a-18.2.d
AQ0074TVP03, Condition 19	AQ0074MSS01	Owner Requested Limit (NOx, SO_2, PM-10)	600 hours rolling 12-month total	Yes	Permit AQ0074TVP03, Conditions 19.1-19.4.
AQ0074TVP03, Condition 21	AQ0074MSS01	Owner Requested Limit: NOx	600 hours, 12 month rolling total hours	Yes	Permit AQ0074TVP03, Conditions 21.1-21.2
AQ0074TVP03, Condition 22	AQ0074MSS01	Owner Requested Limit: SO_2	600 hours, 12 month rolling total hours 0.2 wt% S in diesel fuel	Yes	Permit AQ0074TVP03, Condition 22.1
AQ0074TVP03, Condition 43	40 CFR 63 Subpart ZZZZ, specifically: 40 CFR 63.6603(a); 63.6604; 63.6605(a) and (b); 63.6625(e)(3), (f), (h), and (i) See Permit Conditions 43.1-43.6	Management practices, etc.	Requirements applicable to emergency engines located at an area source.	Yes	MR&R required under Subpart ZZZZ, specifically: 40 CFR 63.6640(a), (b), (e), and (f); 63.6650(f); 63.6655(e) and (f) 63.6660; 63.6665. See Permit Conditions 43.7-43.9

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

FORM B2

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	EU ID 21, Operating Scenario 1
2.	Date installation/construction commenced[1]	
3.	Date installed	
4.	Emission Unit serial number	33-GEN-4605R (tag number)
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer and model number	John Deere
7.	Type of combustion device	Diesel-fired Engine
8.	Rated design capacity (horsepower rating for engines)	
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	
10.	If used for power generation, electrical output (kW)	65 kW

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

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

Fuel	Maximum hourly firing rate (specify units)
Diesel Fuel	4.5 gallons/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit: No modifications, but the current permit incorrectly lists the emitting unit as UPS, which is the manufacturer of the generator, not the engine.

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03 Condition 1	18 AAC 50.055(a)(1)	Visible emissions	20%	Yes	Permit AQ0074TVP03, Condition 1.1
AQ0074TVP03, Condition 5	18 AAC 50.055(b)(1)	Particulate matter	0.05 gr/scf	Yes	Permit AQ0074TVP03, Condition 5.1
AQ0074TVP03, Condition 9	18 AAC 50.055(c)	Sulfur compound emissions	500 ppm	Yes	Permit AQ0074TVP03, Conditions 10 and 11
AQ0074TVP03, Condition 18.2	AQ0074CPT03	Owner Requested Limit	0.2 wt% S limit in liquid fuel	Yes	Permit AQ0074TVP03, Conditions 18.2.a-18.2.d
AQ0074TVP03, Condition 19	AQ0074MSS01	Owner Requested Limit (NOx, SO_2, PM-10)	300 hours rolling 12-month total	Yes	Permit AQ0074TVP03, Conditions 19.1-19.4.
AQ0074TVP03, Condition 21	AQ0074MSS01	Owner Requested Limit: NOx	300 hours, 12 month rolling total hours	Yes	Permit AQ0074TVP03, Conditions 21.1-21.2
AQ0074TVP03, Condition 22	AQ0074MSS01	Owner Requested Limit: SO_2	300 hours, 12 month rolling total hours 0.2 wt% S in diesel fuel	Yes	Permit AQ0074TVP03, Condition 22.1
AQ0074TVP03, Condition 43	40 CFR 63 Subpart ZZZZ, specifically: 40 CFR 63.6603(a); 63.6605(a) and (b); 63.6625(e)(3), (f), (h), and (i). See Conditions 43.2-43.5	Management practices, etc.	Requirements applicable to nonemergency engines located at an area source.	Yes	MR&R required under Subpart ZZZZ, specifically: 40 CFR 63.6640(a), (b), (e), and (f); 63.6650(f); 63.6655(e) and (f) 63.6660; 63.6665. See Conditions 43.7-43.9

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

FORM B2

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

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	EU ID 27, Operating Scenario 1
2.	Date installation/construction commenced[1]	2011
3.	Date installed	
4.	Emission Unit serial number	33-GEN-4401
5.	Special control requirements? [if yes, describe]	
6.	Manufacturer and model number	MTU Detroit
7.	Type of combustion device	Diesel-fired engine
8.	Rated design capacity (horsepower rating for engines)	
9.	Rated design capacity (heat input, MMBtu/hr rating for turbines)	
10.	If used for power generation, electrical output (kW)	800 kWe

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

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

Fuel	Maximum hourly firing rate (specify units)
Diesel Fuel	56 gallons/hr

12.	Describe any specific modifications to the emission unit that must be addressed in the permit:

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03 Condition 1	18 AAC 50.055(a)(1)	Visible emissions	20%	Yes	Permit AQ0074TVP03, Condition 1.1
AQ0074TVP03, Condition 5	18 AAC 50.055(b)(1)	Particulate matter	0.05 gr/scf	Yes	Permit AQ0074TVP03, Condition 5.1
AQ0074TVP03, Condition 9	18 AAC 50.055(c)	Sulfur compound emissions	500 ppm	Yes	Permit AQ0074TVP03, Conditions 10 and 11
AQ0074TVP03, Condition 18.2	AQ0074CPT03	Owner Requested Limit	0.2 wt% S limit in liquid fuel	Yes	Permit AQ0074TVP03, Conditions 18.2.a-18.2.d
AQ0074TVP03, Condition 24	AQ0074MSS02	Owner Requested Limit (NOx)	200 hours rolling 12-month total	Yes	Permit AQ0074MSSP03, Condition 24.1.
AQ0074TVP03, Conditions 36-38	40 CFR 60 NSPS Subpart IIII	Emissions standards and fuel standards, see Conditions 37 and 38	Requirements applicable to new IC engines	Yes	MR&R required under Subpart IIII, see Conditions 39 and 40

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

Form B4
Emission Unit Detail Form—Volatile Liquid Storage Tanks

FORM B4

Emission Unit Detail Form – Volatile Liquid Storage Tanks

Permit Number: AQ0074TVP03

1.	Emission Unit ID Number // Operating Scenario	6
2.	Date installation/construction commenced	Pre-1978
3.	Date installed	Pre-1978
4.	Special control requirements? [if yes, describe]	No
5.	Rated capacity (gallons)	2,310,000 gallons (150,000 bbls)
6.	Tank height (ft)	32
7.	Tank diameter (ft)	116
8.	Tank age (years)	34
9.	Submerged fill pipe?	yes
10.	Type of tank (specify)	fixed roof
11.	Underground?	no
	If underground, specify type of tube and vapor return.	
12.	Above ground vapor control information:	
	Pipe material	
	Pipe size	
	Piping drainage (continuous drain downward or condensate collection tank – if condensate collection, attach a description)	
	Isolation valve installed in piping?	
13.	Pressure vacuum relief valves:	
	Vent pressure settings (psia)	0.006
	Months in which relief valves removed (specify)	N/A
14.	Pressure conservation vent? [if yes, specify pressure setting – psia]	No
15.	Fixed roof tanks:	
	Roof color	White
	Shell color	Green
	Average vapor space height (ft)	22
	Shell condition (specify)	Good

	Emission Unit ID Number	26
16	Floating roof tanks:	
	Type of construction (specify)	
	Condition (specify)	
	Tank color	
	Deck type (specify)	
17.	External floating roof tanks, seal type (specify)	
18.	Internal floating roof tanks:	
	Seal type (specify)	
	Number of columns	
	Effective column diameter (ft)	
	Total deck seam length (ft)	
	Deck fitting types – access hatch	
	bolted cover, gasketed	
	unbolted cover, gasketed	
	unbolted cover, ungasketed	
	Deck fitting types - Automatic gauge float well	
	bolted cover, gasketed	
	unbolted cover, gasketed	
	unbolted cover, ungasketed	
	Deck fitting types – column well	
	Built up column – sliding cover, gasketed	
	Built up column – sliding cover, ungasketed	
	Pipe column – flexible fabric sleeve seal	
	Pipe column – – sliding cover, gasketed	
	Pipe column – – sliding cover, ungasketed	
	Deck fitting types – ladder well	
	sliding cover, gasketed	
	sliding cover, ungasketed	

	Emission Unit ID Number	20
	Deck fitting types – smple well or pipe	
	Slotted pipe – sliding cover, gasketed	
	Slotted pipe – sliding cover, ungasketed	
	Sample well – slit fabric seal, 10% open area	
	Stub drain – 1-inch diameter	
	Deck fitting type – roof leg or hanger will	
	Adjustable	
	fixed	
	Deck fitting type – vacuum breaker	
	Weighted mechanical actuation, gasketed	
	Weighted mechanical actuation, ungasketed	
19.	Maximum liquid loading rate (gal/hr)	1,000,000
20.	Submerged fill at out-loading (describe)	
21.	Material(s) stored	
	Type of material	Crude Oil
	Normal annual throughput (gal/yr)	2,000,000
	Normal turnovers per year	1
	Density (lbs/gal)	7
	Molecular weight	203
	Average storage temperature (°F)	57
	Vapor pressure (psi)	4.3

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Methods Used to Demonstrate Compliance
AQ0074TVP03, Condition 23	Owner Requested Limit	Hazardous Air Pollutant (HAP) ORL	8.0 tpy for any individual HAP; 16.8 tpy for the aggregate total of HAPs.	Yes	Permit AQ0074TVP03, Condition 23.1-23.2

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

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

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis

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

Form Series D

Forms D1 and D2
Spreadsheets Containing Required Information

Emissions Summary
Pump Station 3

Emissions Unit Type	Restricted Emissions (w/Controls and Limitations)						
	NO_X	CO	PM_{10}	VOC	SO_2	CO_2e	HAP
Potential Emissions (w/ Controls and Limitations)							
Significant	193	1,062	11	358	13	188,245	N/A
Insignificant	8.8	4.1	0.8	0.3	8.5	9,686	N/A
Total	202	1,066	12	358	21	197,931	9.0
Unrestricted Emissions (w/o Controls and Limitations)							
Significant	655	1,103	23	373	89	213,262	N/A
Insignificant	8.8	4.09	0.8	0.3	20.1	9,686	N/A
Total	664	1,107	23	374	109	222,947	9.4
Expected Actual Emissions							
Significant	60	252	4	36	3	96,027	2.0
Insignificant	4	2	1	1	1	32,009	0.1
Total	64	254	4.8	37	4	128,036	2.1

Notes:

1. Criteria air pollutant calculations based on AP-42 emission factors, manufacturer's data, and mass balances as shown in accompanying spreadsheets. Additional
2. HAP emissions calculations as shown in following spreadsheets. Note that Tank 150 HAP emissions included directly above are based on the limit of 8.0 tpy (single HAP) under AQC Permit 098CP01. N-hexane is highest emitted HAP.
3. Emissions from insignificant units calculated as shown or estimated based on conservative assumptions.
4. Fees paid on each pollutant emitted in quantities greater than 10 tpy per 18 AAC 50.410.
5. Maximum fuel use rates for all units based on maunufacturer's fuel or heat input rates, and permit operating limits (i.e., ORLs) where applicable.
6. HAP emissions calcualted in detail for restricted PTE (see attached spreadsheets). Unrestricted and actual emissions calculated by proportion, using VOC emissions as a basis.

Assessable Potential to Emit Emissions Inventory - Significant Units
Pump Station 3

No.	Tag No.	Emitting Unit	Fuel	Rating
11	None	Weil McClain Boiler	NG/Dsl	1.7 MMBtu/hr
12	None	Weil McClain Boiler	NG/Dsl	1.7 MMBtu/hr
13	None	Applied Air Systems Heater	NG/Dsl	2.8 MMBtu/hr
15	T105	Detroit Diesel Engine Electric Generator	Dsl	425 kW
16	T106	Cummins NTA855-G3 Engine	Dsl	399 kW
18	33-PK-3601R	Siemens Cyclone Turbine Electric Generator	NG/Dsl	12.9 MW
19	33-PK-3701R	Siemens Cyclone Turbine Electric Generator	NG	12.9 MW
20	33-GEN-3801R	Caterpillar 3516B Engine Electric Generator	Dsl	2,250 kW
21	33-GEN-4605R	UPS Engine Electric Generator	Dsl	65 kW
26	TK-130	Breakout Tank 130	N/A	150,000 bbl
27	33-GEN-4401	MTU Detroit Diesel	Dsl	800 kWe

Notes:

1. Units 11 and 12 meet the size or production rate thresholds for insignificant units under 18 AAC 50.326(g) but cannot be

2. Units 13 and 21 have actual emissions less than the significant thresholds under 18 AAC 50.326(e) but cannot be insignificant per 18 AAC 50.326(d)(1)(B).

Assessable Potential to Emit Emissions Inventory - Insignificant Units
Pump Station 3

No.	Emitting Unit	Fuel	Rating	Basis for Insignificance
None	Burnham PLQ Heater (2)	Fuel Gas	0.76 MMBtu/hr	18 AAC 50.326(g)(5)
None	Turbo Heater	Fuel Gas	0.20 MMBtu/hr	18 AAC 50.326(g)(5)
None	Bock Heater	Fuel Gas	0.75 MMBtu/hr	18 AAC 50.326(g)(5)
None	(8) Hastings Heaters	Fuel Gas	0.30 MMBtu/hr	18 AAC 50.326(g)(5)
None	(2) Modine Heaters	Fuel Gas	0.30 MMBtu/hr	18 AAC 50.326(g)(5)
None	Jackson/Church Heater	Fuel Gas	0.50 MMBtu/hr	18 AAC 50.326(g)(5)
None	Hotsy Steam Cleaner	Fuel Gas	0.98 MMBtu/hr	18 AAC 50.326(g)(5)
None	(9) Tioga Heaters	Dsl	0.60 MMBtu/hr	18 AAC 50.326(g)(7)
None	(2) Tioga Heaters	Dsl	0.98 MMBtu/hr	18 AAC 50.326(g)(7)
None	Chinook Heater	Dsl	0.80 MMBtu/hr	18 AAC 50.326(g)(7)
None	Aerotec Heater	Dsl	0.40 MMBtu/hr	18 AAC 50.326(g)(7)

Assessable Potential to Emit Calculations - NO_X
Pump Station 3

No.	Emitting Unit	Factor Reference	NO_X Emission Factors		Rating	Max Annual Operation w/Limits		Potential Emissions (w/ Limits)	Unrestricted Emissions (w/o Limits)	Estimated Actual Emissions
			Fuel Gas	Diesel		Fuel Gas	Diesel			
11	Weil McClain Boiler	AP-42 Tables 1.4-1 & 1.3-1	100 lb/MMscf	20 lb/Mgal	1.7 MMBtu/hr	14.6 MMscf/yr	500 hr/yr	0.8 tpy	1.1 tpy	0 tpy
12	Weil McClain Boiler	AP-42 Tables 1.4-1 & 1.3-1	100 lb/MMscf	20 lb/Mgal	1.7 MMBtu/hr	14.6 MMscf/yr	500 hr/yr	0.8 tpy	1.1 tpy	0 tpy
13	Applied Air Systems Heater	AP-42 Tables 1.4-1 & 1.3-1	100 lb/MMscf	20 lb/Mgal	2.8 MMBtu/hr	24.1 MMscf/yr	500 hr/yr	1.3 tpy	1.8 tpy	0 tpy
15	Detroit Diesel Engine Generator	AP-42 Table 3.3-1	N/A	4.4 lb/MMBtu	425 kW	N/A	110,000 gal/yr	32.5 tpy	77.1 tpy	0 tpy
16	Cummins NTA855-G3 Engine	AP-42 Table 3.3-1	N/A	4.4 lb/MMBtu	399 kW				72.3 tpy	0.01 tpy
18	Siemens Cyclone Turbine Generator	Manufacturer's Data/PEMS	Load-based. See PS 3 SR Construction Permit and Application					67.7 tpy	67.7 tpy	40 tpy
19	Siemens Cyclone Turbine Generator	Manufacturer's Data/PEMS	Load-based. See PS 3 SR Construction Permit and Application					67.7 tpy	67.7 tpy	20 tpy
20	Caterpillar 3516B Engine Generator	Manufacturer's Data	N/A	71 lb/hr	2,250 kW	N/A	600 hr/yr ORL	21.3 tpy	311 tpy	0 tpy
21	UPS Engine Electric Generator	Tier 2 Standard	N/A	9.2 g/kW-hr	65 kW	N/A	300 hr/yr ORL	0.2 tpy	5.8 tpy	0.01 tpy
26	Breakout Tank 130	N/A	N/A	N/A	150 kbbl	N/A	N/A	N/A	N/A	N/A
27	MTU Detroit Diesel	Manufacturer's Data	N/A	11 lb/hr	800 kWe	N/A	200 hr/yr ORL	1.1 tpy	49.5 tpy	0 tpy
-	Insignificant Diesel Heaters (13)	AP-42 Table 1.3-1	N/A	20 lb/Mgal	8.6 MMBtu/hr	N/A	562,525 gal/yr	5.6 tpy	5.6 tpy	N/A
-	Insignificant Gas Heaters (16)	AP-42 Table 1.4-1	100 lb/MMscf	N/A	7.0 MMBtu/hr	64 MMscf/yr	N/A	3.2 tpy	3.2 tpy	N/A
							Total Emissions - NO_X	202 tpy	664 tpy	60 tpy

Notes:

1. Diesel fuel heating value: 133,925 Btu/gal (HHV)
2. Fuel gas heating value: 961 Btu/scf
3. For 1,000 hour liquid fuel limit on EU 11 & 12, assume 500 hr/yr/unit. Estimated max fuel use: 12.7 gal/hr
4. Operation of EU 13 limited to 500 hr/yr, liquid fuel. Estimated max fuel use: 20.9 gal/hr
5. For the purposes of this analysis, emissions with and without limits for EU 18 and 19 are the same.
   Additional information on the caluclation method used to generate the emissions for these units can be found in the 2003 Title I application.

Assessable Potential to Emit Calculations - CO
Pump Station 3

No.	Emitting Unit	Factor Reference	CO Emission Factor		Rating	Max Annual Operation w/Limits		Potential Emissions (w/ Limits)	Unrestricted Emissions (w/o Limits)	Estimated Actual Emissions
			Fuel Gas	Diesel		Fuel Gas	Diesel			
11	Weil McClain Boiler	AP-42 Tables 1.4-1 & 1.3-1	84 lb/MMscf	5 lb/Mgal	1.7 MMBtu/hr	14.6 MMscf/yr	500 hr/yr	0.6 tpy	0.3 tpy	0 tpy
12	Weil McClain Boiler	AP-42 Tables 1.4-1 & 1.3-1	84 lb/MMscf	5 lb/Mgal	1.7 MMBtu/hr	14.6 MMscf/yr	500 hr/yr	0.6 tpy	0.3 tpy	0 tpy
13	Applied Air Systems Heater	AP-42 Tables 1.4-1 & 1.3-1	84 lb/MMscf	5 lb/Mgal	2.8 MMBtu/hr	24.1 MMscf/yr	500 hr/yr	1.0 tpy	0.5 tpy	0 tpy
15	Detroit Diesel Engine Generator	AP-42 Table 3.3-1	N/A	0.95 lb/MMBtu	425 kW	N/A	110,000 gal/yr	7.0 tpy	16.6 tpy	0 tpy
16	Cummins NTA855-G3 Engine	AP-42 Table 3.3-1	N/A	0.95 lb/MMBtu	399 kW				15.6 tpy	0 tpy
18	Siemens Cyclone Turbine Generator	Manufacturer's Data/PEMS	Load-based. See PS 3 SR Construction Permit and Application					526 tpy	526 tpy	150 tpy
19	Siemens Cyclone Turbine Generator	Manufacturer's Data/PEMS	Load-based. See PS 3 SR Construction Permit and Application					526 tpy	526 tpy	102 tpy
20	Caterpillar 3516B Engine Generator	Manufacturer's Data	N/A	2.2 lb/hr	2,250 kW	N/A	600 hr/yr ORL	0.7 tpy	9.7 tpy	0 tpy
21	UPS Engine Electric Generator	Tier 2 Standard	N/A	5 g/kW-hr	65 kW	N/A	300 hr/yr ORL	0.1 tpy	3.1 tpy	0 tpy
26	Breakout Tank 130	N/A	N/A	N/A	150 kbbl	N/A	N/A	N/A	N/A	N/A
27	MTU Detroit Diesel	Manufacturer's Data	N/A	1.1 lb/hr	800 kWe	N/A	200 hr/yr ORL	0.1 tpy	4.8 tpy	0 tpy
-	Insignificant Diesel Heaters (13)	AP-42 Table 1.3-1	N/A	5 lb/Mgal	8.6 MMBtu/hr	N/A	562,525 gal/yr	1.41 tpy	1.41 tpy	N/A
-	Insignificant Gas Heaters (16)	AP-42 Table 1.4-1	84 lb/MMscf	N/A	7.0 MMBtu/hr	63.8 MMscf/yr	N/A	2.7 tpy	2.7 tpy	N/A
							Total Emissions - CO	1,066 tpy	1,107 tpy	252 tpy

Notes:
1. Diesel fuel heating value: 133,925 Btu/gal (HHV)
2. Fuel gas heating value: 961 Btu/scf
3. For 1,000 hour liquid fuel limit on EU 11 & 12, assume 500 hr/yr/unit. Estimated max fuel use: 12.7 gal/hr
4. Operation of EU 13 limited to 500 hr/yr, liquid fuel. Estimated max fuel use: 20.9 gal/hr
5. For the purposes of this analysis, emissions with and without limits for EU 18 and 19 are the same.
   Additional information on the caluclation method used to generate the emissions for these units can be found in the 2003 Title I application.

Assessable Potential to Emit Calculations - PM_{10}
Pump Station 3

No.	Emitting Unit	Factor Reference	PM_{10} Emission Factor		Rating	Max Annual Operation w/Limits		Potential Emissions (w/ Limits)	Unrestricted Emissions (w/o Limits)	Estimated Actual Emissions
			Fuel Gas	Diesel		Fuel Gas	Diesel			
11	Weil McClain Boiler	AP-42 Tables 1.4-2 & 1.3-1	7.6 lb/MMscf	2 lb/Mgal	1.7 MMBtu/hr	14.6 MMscf/yr	500 hr/yr	0.06 tpy	0.11 tpy	0 tpy
12	Weil McClain Boiler	AP-42 Tables 1.4-2 & 1.3-1	7.6 lb/MMscf	2 lb/Mgal	1.7 MMBtu/hr	14.6 MMscf/yr	500 hr/yr	0.06 tpy	0.11 tpy	0 tpy
13	Applied Air Systems Heater	AP-42 Tables 1.4-2 & 1.3-1	7.6 lb/MMscf	2 lb/Mgal	2.8 MMBtu/hr	24.1 MMscf/yr	500 hr/yr	0.10 tpy	0.18 tpy	0 tpy
15	Detroit Diesel Engine Generator	AP-42 Table 3.3-1	N/A	0.31 lb/MMBtu	425 kW	N/A	110,000 gal/yr	2.3 tpy	5.4 tpy	0 tpy
16	Cummins NTA855-G3 Engine	AP-42 Table 3.3-1	N/A	0.31 lb/MMBtu	399 kW				5.1 tpy	0 tpy
18	Siemens Cyclone Turbine Generator	Manufacturer's Data/PEMS	Load-based. See PS 3 SR Construction Permit and Application					4.05 tpy	4.1 tpy	3 tpy
19	Siemens Cyclone Turbine Generator	Manufacturer's Data/PEMS	Load-based. See PS 3 SR Construction Permit and Application					4.05 tpy	4.1 tpy	1 tpy
20	Caterpillar 3516B Engine Generator	Manufacturer's Data	N/A	0.6 lb/hr	2,250 kW	N/A	600 hr/yr ORL	0.2 tpy	2.4 tpy	0 tpy
21	UPS Engine Electric Generator	AP-42 Table 3.3-1	N/A	0.002 lb/hp-hr	65 kW	N/A	300 hr/yr ORL	0.0 tpy	0.8 tpy	0 tpy
26	Breakout Tank 130	N/A	N/A	N/A	150 kbbl	N/A	N/A	N/A	N/A	N/A
27	MTU Detroit Diesel	Manufacturer's Data	N/A	0.09 lb/hr	800 kWe	N/A	200 hr/yr ORL	0.0 tpy	0.4 tpy	0 tpy
-	Insignificant Diesel Heaters (13)	AP-42 Table 1.3-1	N/A	2 lb/Mgal	8.6 MMBtu/hr	N/A	562.525 gal/yr	0.56 tpy	0.56 tpy	N/A
-	Insignificant Gas Heaters (16)	AP-42 Table 1.4-2	7.6 lb/MMscf	N/A	7.0 MMBtu/hr	64 MMscf/yr	N/A	0.24 tpy	0.24 tpy	N/A
							Total Emissions - PM_{10}	11.6 tpy	23.5 tpy	4 tpy

Notes:
1. Diesel fuel heating value: 133,925 Btu/gal (HHV)
2. Fuel gas heating value: 961 Btu/scf
3. For 1,000 hour liquid fuel limit on EU 11 & 12, assume 500 hr/yr/unit. Estimated max fuel use: 12.7 gal/hr
4. Operation of EU 13 limited to 500 hr/yr, liquid fuel. Estimated max fuel use: 20.9 gal/hr
5. For the purposes of this analysis, emissions with and without limits for EU 18 and 19 are the same.
   Additional information on the caluclation method used to generate the emissions for these units can be found in the 2003 Title I application.

Assessable Potential to Emit Calculations - VOC
Pump Station 3

No.	Emitting Unit	Factor Reference	VOC Emission Factor		Rating	Max Annual Operation w/Limits		Potential Emissions (w/ Limits)	Unrestricted Emissions (w/o Limits)	Estimated Actual Emissions
			Fuel Gas	Diesel		Fuel Gas	Diesel			
11	Weil McClain Boiler	AP-42 Tables 1.4-2 & 1.3-2	5.5 lb/MMscf	0.34 lb/Mgal	1.7 MMBtu/hr	14.6 MMscf/yr	500 hr/yr	0.04 tpy	0.02 tpy	0 tpy
12	Weil McClain Boiler	AP-42 Tables 1.4-2 & 1.3-2	5.5 lb/MMscf	0.34 lb/Mgal	1.7 MMBtu/hr	14.6 MMscf/yr	500 hr/yr	0.04 tpy	0.02 tpy	0 tpy
13	Applied Air Systems Heater	AP-42 Tables 1.4-2 & 1.3-2	5.5 lb/MMscf	0.34 lb/Mgal	2.8 MMBtu/hr	24.1 MMscf/yr	500 hr/yr	0.1 tpy	0.03 tpy	0 tpy
15	Detroit Diesel Engine Generator	AP-42 Table 3.3-1	N/A	0.36 lb/MMBtu	425 kW	N/A	110,000 gal/yr	2.7 tpy	6.3 tpy	0 tpy
16	Cummins NTA855-G3 Engine	AP-42 Table 3.3-1	N/A	0.36 lb/MMBtu	399 kW				5.9 tpy	0 tpy
18	Siemens Cyclone Turbine Generator	AP-42 Table 3.1-2a	Load-based. See PS 3 SR Construction Permit and Application					1.3 tpy	1.3 tpy	0.8 tpy
19	Siemens Cyclone Turbine Generator	AP-42 Table 3.1-2a	Load-based. See PS 3 SR Construction Permit and Application					1.3 tpy	1.3 tpy	0.4 tpy
20	Caterpillar 3516B Engine Generator	Manufacturer's Data	N/A	1.0 lb/hr	2,250 kW	N/A	600 hr/yr ORL	0.3 tpy	4.2 tpy	0 tpy
21	UPS Engine Electric Generator	AP-42 Table 3.3-1	N/A	0.0025 lb/hp-hr	65 kW	N/A	300 hr/yr ORL	0.03 tpy	0.9 tpy	0 tpy
26	Breakout Tank 130	TANKS 4.0	N/A	N/A	150 kbbl	N/A	N/A	352 tpy	352 tpy	35.0 tpy
27	MTU Detroit Diesel	Manufacturer's Data	N/A	0.27 lb/hr	800 kWe	N/A	200 hr/yr ORL	0.0 tpy	1.2 tpy	0 tpy
-	Insignificant Diesel Heaters (13)	AP-42 Table 1.3-2	N/A	0.34 lb/Mgal	8.6 MMBtu/hr	N/A	562,525 gal/yr	0.1 tpy	0.1 tpy	N/A
-	Insignificant Gas Heaters (16)	AP-42 Table 1.4-2	5.5 lb/MMscf	N/A	7.0 MMBtu/hr	64 MMscf/yr	N/A	0.2 tpy	0.2 tpy	N/A
							Total Emissions - VOC	358 tpy	374 tpy	36 tpy

Notes:
1. Diesel fuel heating value: 133,925 Btu/gal (HHV)
2. Fuel gas heating value: 961 Btu/scf
3. For 1,000 hour liquid fuel limit on EU 11 & 12, assume 500 hr/yr/unit. Estimated max fuel use: 12.7 gal/hr
4. Operation of EU 13 limited to 500 hr/yr, liquid fuel. Estimated max fuel use: 20.9 gal/hr
5. For the purposes of this analysis, emissions with and without limits for EU 18 and 19 are the same.
   Additional information on the caluclation method used to generate the emissions for these units can be found in the 2003 Title I application.

Assessable Potential to Emit Calculations - SO_2
Pump Station 3

No.	Emitting Unit	Factor Reference	Sulfur Content		Rating	Max Annual Operation w/Limits		Potential Emissions (w/ Limits)	Unrestrcted Emissions (w/o Limits)	Estimated Actual Emissions
			Fuel Gas	Diesel		Fuel Gas	Diesel			
11	Weil McClain Boiler	Mass Balance	150 ppm H_2S	0.2 wt% S	1.7 MMBtu/hr	14.6 MMscf/yr	500 hr/yr	0.27 tpy	3.8 tpy	0 tpy
12	Weil McClain Boiler	Mass Balance	150 ppm H_2S	0.2 wt% S	1.7 MMBtu/hr	14.6 MMscf/yr	500 hr/yr	0.27 tpy	3.8 tpy	0 tpy
13	Applied Air Systems Heater	Mass Balance	150 ppm H_2S	0.2 wt% S	2.8 MMBtu/hr	24.1 MMscf/yr	500 hr/yr	0.45 tpy	6.3 tpy	0 tpy
15	Detroit Diesel Engine Generator	Mass Balance	N/A	0.2 wt% S	425 kW	N/A	110,000 gal/yr	1.5 tpy	8.9 tpy	0 tpy
16	Cummins NTA855-G3 Engine	Mass Balance	N/A	0.2 wt% S	399 kW				8.3 tpy	0 tpy
18	Siemens Cyclone Turbine Generator	Mass Balance	Load-based. See PS 3 SR Construction Permit and Application					4.5 tpy	4.5 tpy	2 tpy
19	Siemens Cyclone Turbine Generator	Mass Balance	Load-based. See PS 3 SR Construction Permit and Application					4.5 tpy	4.5 tpy	1 tpy
20	Caterpillar 3516B Engine Generator	Mass Balance	N/A	0.2 wt% S	2,250 kW	N/A	600 hr/yr ORL	1.3 tpy	47.5 tpy	0 tpy
21	UPS Engine Electric Generator	Mass Balance	N/A	0.2 wt% S	65 kW	N/A	300 hr/yr ORL	0.004 tpy	1.4 tpy	0 tpy
26	Breakout Tank 130	N/A	N/A	N/A	150 kbbl	N/A	N/A	N/A	N/A	N/A
27	MTU Detroit Diesel	Manufacturer's Data	N/A	15 ppm S	800 kWe	N/A	200 hr/yr ORL	0.001 tpy	0.05 tpy	0 tpy
-	Insignificant Diesel Heaters (13)	Mass Balance	N/A	0.2 wt% S	8.6 MMBtu/hr	N/A	562,525 gal/yr	7.7 tpy	19.3 tpy	N/A
-	Insignificant Gas Heaters (16)	Mass Balance	150 ppm H_2S	N/A	7.0 MMBtu/hr	64 MMscf/yr	N/A	0.8 tpy	0.8 tpy	N/A
							Total Emissions - SO_2	21.2 tpy	109 tpy	3 tpy

Notes:

1. Diesel fuel heating value: 133,925 Btu/gal (HHV)
2. Default engine heat rate: 7,000 Btu/hp-hr
3. Cat 3516B engine heat rate: 8,914 Btu/kW-hr
4. Diesel fuel maximum sulfur content: 0.2 wt%
5. Diesel fuel density: 6.9 lb/gal
6. Fuel gas heating value: 961 Btu/scf
7. For 1,000 hour liquid fuel limit on EU 11 & 12, assume 500 hr/yr/unit. Max fuel use: 12.7 gal/hr
8. Operation of EU 13 limited to 500 hr/yr, liquid fuel. Estimated max fuel use: 20.9 gal/hr
9. For the purposes of this analysis, emissions with and without limits for EU 18 and 19 are the same.
   Additional information on the caluclation method used to generate the emissions for these units can be found in the 2003 Title I application.
10. Fuel sulfur content is assumed to be 0.5% for emissions w/o limits, 0.2% for emissions w/ limits, except that as required by Subpart IIII, a fuel sulfur content of 15 ppm is used for EU 27.

Assessable Potential to Emit Calculations - N_2O
Pump Station 3

No.	Emitting Unit	Factor Reference	N_2O (CO_2e) Emission Factors		Rating	Max Annual Operation w/Limits		Potential Emissions (w/ Limits)	Unrestricted Emissions (w/o Limits)	Estimated Actual Emissions
			Fuel Gas	Diesel		Fuel Gas	Diesel			
11	Weil McClain Boiler	40 CFR 98, Table C-2	0.07 lb/MMBtu	0.39 lb/MMBtu	1.7 MMBtu/hr	14,042 MMBtu/yr	850 MMBtu/yr	0.6 tpy	2.9 tpy	0 tpy
12	Weil McClain Boiler	40 CFR 98, Table C-2	0.07 lb/MMBtu	0.39 lb/MMBtu	1.7 MMBtu/hr	14,042 MMBtu/yr	850 MMBtu/yr	0.6 tpy	2.9 tpy	0 tpy
13	Applied Air Systems Heater	40 CFR 98, Table C-2	0.07 lb/MMBtu	0.39 lb/MMBtu	2.8 MMBtu/hr	23,128 MMBtu/yr	1,400 MMBtu/yr	1.0 tpy	4.8 tpy	0 tpy
15	Detroit Diesel Engine Generator	40 CFR 98, Table C-2	N/A	0.39 lb/MMBtu	425 kW	N/A	14,732 MMBtu/yr	2.9 tpy	6.9 tpy	0 tpy
16	Cummins NTA855-G3 Engine	40 CFR 98, Table C-2	N/A	0.39 lb/MMBtu	399 kW				6.5 tpy	0 tpy
18	Siemens Cyclone Turbine Generator	40 CFR 98, Table C-2	0.07 lb/MMBtu	0.39 lb/MMBtu	Load-based. See PS 3 SR Construction Permit and Application			222 tpy	222 tpy	77 tpy
19	Siemens Cyclone Turbine Generator	40 CFR 98, Table C-2	0.07 lb/MMBtu	N/A	Load-based. See PS 3 SR Construction Permit and Application			222 tpy	222 tpy	157 tpy
20	Caterpillar 3516B Engine Generator	40 CFR 98, Table C-2	N/A	0.39 lb/MMBtu	2,250 kW	N/A	12,672 MMBtu/yr	2.5 tpy	36.4 tpy	0 tpy
21	UPS Engine Electric Generator	40 CFR 98, Table C-2	N/A	0.39 lb/MMBtu	65 kW	N/A	183 MMBtu/yr	0.04 tpy	1.1 tpy	0 tpy
26	Breakout Tank 130	NA	N/A	N/A	150 kbbl	N/A	N/A	N/A	N/A	NA
27	MTU Detroit Diesel	40 CFR 98, Table C-2	N/A	0.39 lb/MMBtu	800 kWe	N/A	1,502 MMBtu/yr	0.3 tpy	13.0 tpy	0 tpy
-	Insignificant Diesel Heaters (13)	41 CFR 98, Table C-2	N/A	0.39 lb/MMBtu	8.6 MMBtu/hr	N/A	75,336 MMBtu/yr	14.8 tpy	14.8 tpy	N/A
-	Insignificant Gas Heaters (16)	42 CFR 98, Table C-2	0.07 lb/MMBtu	N/A	7.0 MMBtu/hr	61,320 MMBtu/yr	N/A	2.0 tpy	2.0 tpy	N/A
							Total Emissions - N_2O (CO_2e)	469 tpy	536 tpy	234 tpy

Notes:

1. Diesel fuel heating value: 133,925 Btu/gal (HHV)
2. Fuel gas heating value: 961 Btu/scf
3. Engine heat rate: 7,000 btu/hp-hr
4. For 1,000 hour liquid fuel limit on EU 11 & 12, assume 500 hr/yr/unit. Estimated max fuel use: 12.7 gal/hr
5. Operation of EU 13 limited to 500 hr/yr, liquid fuel. Estimated max fuel use: 20.9 gal/hr
6. EU 18/19 firing rate, annual avg, 100% load. See Title I application (2004). 128.8 MMBtu/hr

Assessable Potential to Emit Calculations - CH_4
Pump Station 3

No.	Emitting Unit	Factor Reference	CH_4 (CO2e) Emission Factors		Rating	Max Annual Operation w/Limits		Potential Emissions (w/ Limits)	Unrestricted Emissions (w/o Limits)	Estimated Actual Emissions
			Fuel Gas	Diesel		Fuel Gas	Diesel			
11	Weil McClain Boiler	40 CFR 98, Table C-2	0.06 lb/MMBtu	0.17 lb/MMBtu	1.7 MMBtu/hr	14,042 MMBtu/yr	850 MMBtu/yr	0.5 tpy	1.2 tpy	0 tpy
12	Weil McClain Boiler	40 CFR 98, Table C-2	0.06 lb/MMBtu	0.17 lb/MMBtu	1.7 MMBtu/hr	14,042 MMBtu/yr	850 MMBtu/yr	0.5 tpy	1.2 tpy	0 tpy
13	Applied Air Systems Heater	40 CFR 98, Table C-2	0.06 lb/MMBtu	0.17 lb/MMBtu	2.8 MMBtu/hr	23,128 MMBtu/yr	1,400 MMBtu/yr	0.8 tpy	2.0 tpy	0 tpy
15	Detroit Diesel Engine Generator	40 CFR 98, Table C-2	N/A	0.17 lb/MMBtu	425 kW	N/A	14,732 MMBtu/yr	1.2 tpy	2.9 tpy	0 tpy
16	Cummins NTA855-G3 Engine	40 CFR 98, Table C-2	N/A	0.17 lb/MMBtu	399 kW				2.7 tpy	0 tpy
18	Siemens Cyclone Turbine Generator	40 CFR 98, Table C-2	0.06 lb/MMBtu	0.17 lb/MMBtu	Load-based. See PS 3 SR Construction Permit and Application			93 tpy	93 tpy	32 tpy
19	Siemens Cyclone Turbine Generator	40 CFR 98, Table C-2	0.06 lb/MMBtu	N/A	Load-based. See PS 3 SR Construction Permit and Application			93 tpy	93 tpy	66 tpy
20	Caterpillar 3516B Engine Generator	40 CFR 98, Table C-2	N/A	0.17 lb/MMBtu	2,250 kW	N/A	12,663 MMBtu/yr	1.0 tpy	15.3 tpy	0 tpy
21	UPS Engine Electric Generator	40 CFR 98, Table C-2	N/A	0.17 lb/MMBtu	65 kW	N/A	183 MMBtu/yr	0.02 tpy	0.4 tpy	0 tpy
26	Breakout Tank 130	NA	N/A	N/A	150 kbbl	N/A	N/A	N/A	N/A	NA
27	MTU Detroit Diesel	40 CFR 98, Table C-2	N/A	0.17 lb/MMBtu	800 kWe	N/A	1,501 MMBtu/yr	0.1 tpy	5.4 tpy	0 tpy
-	Insignificant Diesel Heaters (13)	41 CFR 98, Table C-2	N/A	0.17 lb/MMBtu	8.6 MMBtu/hr	N/A	75,336 MMBtu/yr	6.2 tpy	6.2 tpy	N/A
-	Insignificant Gas Heaters (16)	42 CFR 98, Table C-2	0.06 lb/MMBtu	N/A	7.0 MMBtu/hr	61,320 MMBtu/yr	N/A	1.7 tpy	1.7 tpy	N/A
							Total Emissions - CH_4 (CO_2e)	198 tpy	226 tpy	98 tpy

Notes:

1. Maximum fuel use rates for all units based on maunufacturer's fuel or heat input rates, and permit operating limits where applicable.
2. Diesel fuel heating value: 133,925 Btu/gal (HHV)
3. Fuel gas heating value: 961 Btu/scf
4. Engine heat rate: 7,000 btu/hp-hr
5. For 1,000 hour liquid fuel limit on EU 11 & 12, assume 500 hr/yr/unit. Max fuel use: 12.7 gal/hr
6. Operation of EU 13 limited to 500 hr/yr, liquid fuel. Estimated max fuel use: 20.9 gal/hr
7. EU 18/19 firing rate, annual avg, 100% load. See TI app (2004) 128.8 MMBtu/hr

Assessable Potential to Emit Calculations - CO_2
Pump Station 3

No.	Emitting Unit	Factor Reference	CO_2 Emission Factors		Rating	Max Annual Operation w/Limits		Potential Emissions (w/ Limits)	Unrestricted Emissions (w/o Limits)	Estimated Actual Emissions
			Fuel Gas	Diesel		Fuel Gas	Diesel			
11	Weil McClain Boiler	40 CFR 98, Table C-1	117 lb/MMBtu	161 lb/MMBtu	1.7 MMBtu/hr	14,042 MMBtu/yr	850 MMbtu/yr	889 tpy	1,201 tpy	0 tpy
12	Weil McClain Boiler	40 CFR 98, Table C-1	117 lb/MMBtu	161 lb/MMBtu	1.7 MMBtu/hr	14,042 MMBtu/yr	850 MMbtu/yr	889 tpy	1,201 tpy	0 tpy
13	Applied Air Systems Heater	40 CFR 98, Table C-1	117 lb/MMBtu	161 lb/MMBtu	2.8 MMBtu/hr	23,128 MMBtu/yr	1,400 MMbtu/yr	1,464 tpy	1,979 tpy	0 tpy
15	Detroit Diesel Engine Generator	40 CFR 98, Table C-1	N/A	161 lb/MMBtu	425 kW	N/A	14,732 MMBtu/yr	1,188 tpy	2,819 tpy	0 tpy
16	Cummins NTA855-G3 Engine	40 CFR 98, Table C-1	N/A	161 lb/MMBtu	399 kW				2,647 tpy	0 tpy
18	Siemens Cyclone Turbine Generator	40 CFR 98, Table C-1	117 lb/MMBtu	161 lb/MMBtu	Load-based. See PS 3 SR Construction Permit and Application			91,007 tpy	91,007 tpy	31,349 tpy
19	Siemens Cyclone Turbine Generator	40 CFR 98, Table C-1	117 lb/MMBtu	N/A	Load-based. See PS 3 SR Construction Permit and Application			91,007 tpy	91,007 tpy	64,346 tpy
20	Caterpillar 3516B Engine Generator	40 CFR 98, Table C-1	N/A	161 lb/MMBtu	2,250 kW	N/A	12,663 MMBtu/yr	1,022 tpy	14,926 tpy	0 tpy
21	UPS Engine Electric Generator	40 CFR 98, Table C-1	N/A	161 lb/MMBtu	65 kW	N/A	183 MMBtu/yr	15 tpy	431 tpy	0 tpy
26	Breakout Tank 130	N/A	N/A	N/A	150 kbbl	N/A	N/A	N/A	N/A	N/A
27	MTU Detroit Diesel	40 CFR 98, Table C-1	N/A	161 lb/MMBtu	800 kWe	N/A	1,502 MMBtu/yr	121 tpy	5,307 tpy	0 tpy
-	Insignificant Diesel Heaters (13)	40 CFR 98, Table C-1	N/A	161 lb/MMBtu	8.6 MMBtu/hr	N/A	75,336 MMBtu/yr	6,077 tpy	6,077 tpy	N/A
-	Insignificant Gas Heaters (16)	40 CFR 98, Table C-1	117 lb/MMBtu	N/A	7.0 MMBtu/hr	61,320 MMBtu/yr	N/A	3,583 tpy	3,583 tpy	N/A
							Total Emissions - CO_2	197,263 tpy	222,186 tpy	95,695 tpy

Notes:
1. Maximum fuel use rates for all units based on maunufacturer's fuel or heat input rates, and permit operating limits where applicable.
2. Diesel fuel heating value: 133,925 Btu/gal (HHV)
3. Fuel gas heating value: 961 Btu/scf
4. Engine heat rate: 7,000 btu/hp-hr
5. For 1,000 hour liquid fuel limit on EU 11 & 12, assume 500 hr/yr/unit. Max fuel use: 12.7 gal/hr
6. Operation of EU 13 limited to 500 hr/yr, liquid fuel. Estimated max fuel use: 20.9 gal/hr
7. EU 18/19 firing rate, annual avg, 100% load. See TI app (2004) 128.8 MMBtu/hr

Summary of Estimated Assessable Potential HAP Emissions
TAPS Pump Station 3

Hazardous Air Pollutant	HAP Emissions by Unit Category (tons per year)					HAP Emissions (w/ Controls)
	Breakout Tank	Gas/Diesel Turbines	Diesel Engines	Gas/Diesel Heaters	Fugitives	
Acetaldehyde	----	4.33E-02	1.06E-02	3.94E-02	----	0.093
Acrolein	----	6.92E-03	1.28E-03	----	----	0.008
Benzene	1.50E+00	1.30E-02	1.29E-02	1.72E-04	1.66E-01	1.688
Biphenyl	----	8.06E-02	----	----	----	0.081
1,3 Butadiene	0.00E+00	4.65E-04	5.42E-04	1.83E-02	0.00E+00	0.019
Ethyl Benzene	1.05E-01	3.46E-02	----	1.87E-02	9.00E-02	0.248
Formaldehyde	----	7.68E-01	1.64E-02	1.32E-02	----	0.798
N-Hexane	7.25E+00	3.67E-01	----	1.72E-01	5.15E-01	8.300
Butoxyethanol	----	----	----	----	----	0.000
Hydrochloric Acid	----	----	----	----	----	0.000
Isopropylbenzene	1.35E-02	----	----	----	2.25E-02	0.036
Methanol	----	----	----	5.15E-02	----	0.051
Napthalene	2.96E-02	1.41E-03	1.18E-03	3.50E-04	7.20E-02	0.105
Phosporous	----	1.59E-02	----	----	----	0.016
Phenol	----	2.69E-02	----	5.72E-06	----	0.027
Polycyclic Organic Matter	----	2.38E-03	2.33E-03	9.33E-04	----	0.006
Propionaldehyde	----	2.11E-01	----	----	----	0.211
Propylene oxide	----	3.14E-02	----	----	----	0.031
Styrene	----	----	----	1.76E-02	----	0.018
1,1,1-Trichloroethane	----	----	----	6.64E-05	----	0.000
2,2,4 Trimethylpentane	0.00E+00	3.92E-01	----	2.03E-02	0.00E+00	0.412
2,3,7,8-Tetrachlorodibenzo-p-dioxin	----	----	----	----	----	0.000
Toluene	1.22E+00	1.41E-01	5.67E-03	1.92E-03	4.79E-01	1.850
Xylenes	4.45E-01	6.92E-02	3.95E-03	1.87E-02	4.28E-01	0.965
Arsenic Compounds	----	1.46E-04	----	1.61E-04	----	0.000
Beryllium Compounds	----	2.44E-05	----	1.14E-04	----	0.000
Cadmium Compounds	----	4.88E-05	----	1.72E-04	----	0.000
Chromium Compounds	----	2.00E-03	----	1.88E-04	----	0.002
Cobalt Compounds	----	3.90E-04	----	4.49E-06	----	0.000
Lead Compounds	----	8.30E-04	----	3.65E-04	----	0.001
Manganese Compounds	----	4.27E-03	----	2.46E-04	----	0.005
Mercury Compounds	----	6.59E-04	----	1.27E-04	----	0.001
Nickel Compounds	----	1.49E-03	----	2.25E-04	----	0.002
Selenium Compounds	----	7.32E-05	----	5.66E-04	----	0.001
Total - Unit Category/Source	**10.6**	**2.2**	**0.05**	**0.38**	**1.8**	**15.0**

Notes:

1. Breakout tank HAP emissions are based on a crude breakout flow rate of 1,550,000 bbl/yr. See HAP tonnage ORLs under AQC Permit AQ0074CPT02 that cap individual and aggregate HAP emissions from this emitting unit.
2. See individual emissions unit category emissions calculations for details on methodology and assumptions.

Estimating Procedure for Determining HAP Content of Crude Storage Tank Vapors

I. Sample Description/Comments

1. PS 1 discharge stream sample
2. Sample Date: 10/31/02
3. Sample ID: L1-021031-06
4. Core Laboratories data includes crude molecular weight and component wt% values.

II. Determine Component Mole Fractions in Liquid Crude

Methodology Assumptions/Comments:
1. The component mole fraction in crude is determined from component weight fraction and component molecular weight by assuming a mass of 1,000 lb of crude (see AP-42 Section 7.1.5).
1. The component mole fraction in crude is determined from component weight fraction

2. The component molecular weight of Decanes+ is equal to the value required for the sum of all molecular weights to be equal to the Core Laboratories measured crude molecular weight of: 232 lb/lb-mole

Liquid Crude Analysis Data		Calculate Component Mole Fraction in Crude				
Component **i**	Component Weight Fraction in Crude (wt%/100) $\mathbf{Z_{Li}}$	Component Molecular Weight $\mathbf{M_i}$	Total Moles of Crude (sum ZL_i/M_i x 1000) $\mathbf{x_T}$	Component Mole Fraction in Crude ($Z_{Li}/M_i/x_T$) $\mathbf{x_i}$	Crude Molecular Weight (sum Mi*x_i)	$\mathbf{M_T}$
Methane	0	16	0.0000	0.0000		0.000
Ethane	0.0002	30	0.0067	0.0015		0.046
Propane	0.003	44	0.0680	0.0158		0.696
Isobutane	0.0044	58	0.0757	0.0176		1.021
N-Butane	0.0152	58	0.2615	0.0607		3.529
1,3 Butadiene	0	54	0.0000	0.0000		0.000
Isopentane	0.0088	72	0.1220	0.0283		2.043
N-Pentane	0.0127	72	0.1760	0.0409		2.948
N-Hexane	0.0104	86	0.1206	0.0280		2.414
Hexanes	0.0118	84	0.1405	0.0326		2.739
Benzene	0.0033	78	0.0423	0.0098		0.766
Heptanes	0.0392	97	0.4041	0.0938		9.100
2,2,4 Trimethylpentane	0	114	0.0000	0.0000		0.000
Toluene	0.0084	92	0.0912	0.0212		1.950
Octanes	0.0464	111	0.4180	0.0970		10.771
Ethyl Benzene	0.002	106	0.0188	0.0044		0.464
Xylenes	0.0095	106	0.0896	0.0208		2.205
Isopropylbenzene	0.0005	120	0.0042	0.0010		0.116
Nonanes	0.031	123	0.2520	0.0585		7.196
Naphthalene	0.0016	128	0.0125	0.0029		0.371
Decanes+	0.7916	395	2.0041	0.4652		183.761
SUM Z_{Li} / x_T / x_i / M_T	1.00		4.3078	1.00		232

Note:
1. Molecular weight values for component groups such as octanes are estimates from Core Laboratories.

Estimating Procedure for Determining HAP Content of Crude Storage Tank Vapors

III. Determine Component Vapor Pressure at Given Crude Temperature

Methodology Assumptions/Comments:

1. Clausius-Clapeyron equation provides relationship between temperature and vapor pressure:

$$\log P_2/P_1 = H_v/2.303R*(T_2-T_1/T_2T_1)$$

where R = Universal Gas Constant = 8.31448 J/g-mole·K = 3.58 Btu/lb-mole·K
Hv = Heat of Vaporization = see table below

2. Let P_1 be known component vapor pressure at known temperature T_1 = 100 F (311 K), and P_2 be unknown component vapor pressure at given crude temperature T_2 (shown below).
2. Let P_1 be known component vapor pressure at known temperature T_1 = 100 F (311 K),

3. PS 3 crude (and vapor) constant temperature (P_2) of: 102 F 312 K
Based on average crude temperature at PS 3 during peak flow year 1995.

Component Physical Properties			Component Vapor Pressure at Crude Temperature			
Component **i**	Component Vapor Pressure at 100F (psia) **P_1**	Component Heat of Vaporization (Btu/lb-mole) **H_v**	Component Heat of Vaporization/ Gas Constant $H_v/2.303R$	Calculate $(T_2-T_1)/T_2T_1$	Calculate Inverse Log of $(H_v/2.303R)*(T_2-T_1)/T_2T_1$	Component Vapor Pressure at Crude Temperature (psia) **P_2**
Methane	5000	3520	426.9	0.000011	1.011	5056
Ethane	800	6349	770.1	0.000011	1.020	816
Propane	189	8071	978.9	0.000011	1.026	194
Isobutane	72.6	9136	1108.2	0.000011	1.030	74.7
N-Butane	51.7	9642	1169.5	0.000011	1.031	53.3
1,3 Butadiene	59.5	10025	1215.9	0.000011	1.033	61.4
Isopentane	20.4	10613	1287.3	0.000011	1.034	21.1
N-Pentane	15.6	11082	1344.2	0.000011	1.036	16.2
N-Hexane	4.96	12404	1504.5	0.000011	1.040	5.16
Hexanes	10	12500	1516.1	0.000011	1.041	10.41
Benzene	3.22	13215	1602.8	0.000011	1.043	3.36
Heptanes	3.5	13500	1637.4	0.000011	1.044	3.65
2,2,4 Trimethylpentane	1.70	14000	1698.1	0.000011	1.046	1.78
Toluene	1.03	14263	1730.0	0.000011	1.047	1.08
Octanes	1	14500	1758.7	0.000011	1.047	1.05
Ethyl Benzene	0.37	15288	1854.3	0.000011	1.050	0.39
Xylenes	0.33	16000	1940.6	0.000011	1.052	0.35
Isopropylbenzene	0.19	16136	1957.1	0.000011	1.053	0.20
Nonanes	0.40	16500	2001.3	0.000011	1.054	0.42
Naphthalene	0.13	16700	2025.5	0.000011	1.055	0.14
Decanes+	0.1	47282	5734.7	0.000011	1.163	0.12

Notes:

1. Heat of Vaporization and vapor pressure of pure components from GPSA Engineering Data Book, Volume II, Section 23.
2. Vapor pressure values for component groups such as octanes are estimates from Core Laboratories.
3. Heat of Vaporization values for component groups are estimates based on values for individual components within the group

IV. Determine Component Partial Pressure and Mole Fraction in Crude Vapor

Methodology Assumptions/Comments:

1. Conservatively assume C1-C10 hydrocarbons and HAPs are only species present in vapor phase due to dramatic dropoff in component vapor pressue as component molecular weight increases.

2. For speciation purposes, assume crude vapor pressure (P_{VA}) equal to sum of component partial pressures indicated below. This assumption ignores CO_2 present in crude and is conservative because it results in vapor mole fractions of listed components (including HAPs) being overstated.

3. Component partial pressure is equal to the component mole fraction in the liquid crude multiplied by the component vapor pressure at the given crude temperature:
3. Component partial pressure is equal to the component mole fraction in the liquid crude multiplied by

$$P_i = P_2 * x_i$$

4. The component mole fraction in the crude vapor is then equal to the component partial pressure divided by the overall crude vapor pressure:

$$y_i = P_i / P_{VA}$$

	Calculation of Component Partial Pressure and Mole Fraction in Vapor			
Component **i**	Component Vapor Pressure at Crude Temperature (psia) **P_2**	Component Mole Fraction in Crude ($Z_{Li}/M_i/x_T$) **x_i**	Component Partial Pressure at Crude Temperature (P_2*x_i) **P_i**	Component Mole Fraction in Vapor (P_i/P_{VA}) **y_i**
Methane	5056	0.0000	0.000	0.0000
Ethane	816	0.0015	1.260	0.1126
Propane	194	0.0158	3.057	0.2729
Isobutane	74.7	0.0176	1.314	0.1173
N-Butane	53.3	0.0607	3.237	0.2890
1,3 Butadiene	61.4	0.0000	0.000	0.0000
Isopentane	21.1	0.0283	0.599	0.0535
N-Pentane	16.2	0.0409	0.660	0.0590
N-Hexane	5.16	0.0280	0.145	0.0129
Hexanes	10.41	0.0326	0.339	0.0303
Benzene	3.36	0.0098	0.033	0.0029
Heptanes	3.65	0.0938	0.343	0.0306
2,2,4 Trimethylpentane	1.78	0.0000	0.000	0.0000
Toluene	1.08	0.0212	0.023	0.0020
Octanes	1.05	0.0970	0.102	0.0091
Ethyl Benzene	0.39	0.0044	0.002	0.0002
Xylenes	0.35	0.0208	0.007	0.0006
Isopropylbenzene	0.20	0.0010	0.000	0.0000
Nonanes	0.42	0.0585	0.025	0.0022
Naphthalene	0.14	0.0029	0.000	0.0000
Decanes+	0.12	0.4652	0.054	0.0048
P_{VA} / y_i SUM			11.2	1.00

V. Determine Component Weight Fractions in Crude Vapor

1. Component weight fraction in the vapor is determined in two steps. First, the overall vapor molecular weight is determined by summing the product of the molecular weight and vapor mole fraction for each component:

$$M_V = \text{sum } (M_i * y_i)$$

2. Then, the component weight fraction is determined by dividing the product of the molecular weight and vapor mole fraction for each component by the overall vapor molecular weight:

$$Z_{Vi} = (M_i * y_i)/M_V$$

Component Physical Properties		Calculation of Component Weight Fraction in Vapor		
Component **i**	Component Molecular Weight **M_i**	Component Mole Fraction in Vapor (P_i/P_{VA}) **y_i**	Calculate Vapor Molecular Weight (sum M_i*y_i) **M_V**	Component Weight Fraction in Vapor ($Mi*y_i/M_V$) **Z_{Vi}**
Methane	16	0.0000	0.00	0.0000
Ethane	30	0.1126	3.38	0.0589
Propane	44	0.2729	12.04	0.2094
Isobutane	58	0.1173	6.82	0.1186
N-Butane	58	0.2890	16.80	0.2923
1,3 Butadiene	54	0.0000	0.00	0.0000
Isopentane	72	0.0535	3.86	0.0671
N-Pentane	72	0.0590	4.25	0.0740
N-Hexane	86	0.0129	1.11	0.0194
Hexanes	84	0.0303	2.55	0.0443
Benzene	78	0.0029	0.23	0.0040
Heptanes	97	0.0306	2.97	0.0517
2,2,4 Trimethylpentane	114	0.0000	0.00	0.0000
Toluene	92	0.0020	0.19	0.0033
Octanes	111	0.0091	1.01	0.0175
Ethyl Benzene	106	0.0002	0.02	0.0003
Xylenes	106	0.0006	0.07	0.0012
Isopropylbenzene	120	0.0000	0.00	0.0000
Nonanes	123	0.0022	0.27	0.0047
Naphthalene	128	0.0000	0.00	0.0001
Decanes+	395	0.0048	1.91	0.0332
y_i SUM / M_v / Z_{vi} SUM		1.00	57.5	1.00

Estimated Potential HAP Emissions - Breakout Tank
Pump Station 3

1. The TOC emissions (losses) are determined from EPA's TANKS 4.0 program. Individual component emission rates (losses) are then determined using the vapor phase weight fractions previously determined for each component.

$$L_{Ti} = (Z_{Vi})(L_T)$$

2. Based on a maximum flow of crude to the breakout tank of: 1,550,000 bbl/yr
65,100,000 gal/yr

The total TOC losses from the breakout tank are: 748,650 lb/yr
374 tpy

Calculation of Component Emission Rates (Losses)				
Component **i**	Component Weight Fraction in Vapor Z_{Vi}	TOC Losses (from TANKS) L_T	Component Emission Rate/Loss L_{Ti}	Total HAP Emission Rate/Losses L_{HAP}
Methane	0.0000	374	0.00	N/A
Ethane	0.0589	374	22.04	N/A
Propane	0.2094	374	78.40	N/A
Isobutane	0.1186	374	44.40	N/A
N-Butane	0.2923	374	109.41	N/A
1,3 Butadiene	0.0000	374	0.00	0.00
Isopentane	0.0671	374	25.12	N/A
N-Pentane	0.0740	374	27.71	N/A
N-Hexane	0.0194	374	7.25	7.25
Hexanes	0.0443	374	16.58	N/A
Benzene	0.0040	374	1.50	1.50
Heptanes	0.0517	374	19.34	N/A
2,2,4 Trimethylpentane	0.0000	374	0.00	0.00
Toluene	0.0033	374	1.22	1.22
Octanes	0.0175	374	6.56	N/A
Ethyl Benzene	0.0003	374	0.10	0.10
Xylenes	0.0012	374	0.45	0.45
Isopropylbenzene	0.0000	374	0.01	0.01
Nonanes	0.0047	374	1.76	N/A
Naphthalene	0.0001	374	0.03	0.03
Decanes+	0.0332	374	12.43	N/A
L_{Ti} SUM / L_{HAP} SUM			374	10.6

Estimated Potential HAP Emissions - NG-Fired Turbines
Pump Station 3

All NG-Fired Turbines

Maximum Total Heat Input: 247 **MMBtu/hr**
2,163,720 **MMBtu/yr**

Section 112 Hazardous Air Pollutants			Source Category Emission Calculations		Factor
No.	**CAS No.**	**Chemical Name**	**Emission Factor**	**Estimated Emissions**	**Reference**
9	106990	1,3-Butadiene	4.30E-07 lb/MMBtu	4.65E-04 tpy	EPA
14	540841	2,2,4-Trimethylpentane	3.62E-04 lb/MMBtu	3.92E-01 tpy	GRI Field
35	75070	Acetaldehyde	4.00E-05 lb/MMBtu	4.33E-02 tpy	EPA
39	107028	Acrolein	6.40E-06 lb/MMBtu	6.92E-03 tpy	EPA
46	N/A	Arsenic Compounds	1.35E-07 lb/MMBtu	1.46E-04 tpy	GRI Field
48	71432	Benzene	1.20E-05 lb/MMBtu	1.30E-02 tpy	EPA
52	N/A	Beryllium Compounds	2.26E-08 lb/MMBtu	2.44E-05 tpy	GRI Field
54	92524	Biphenyl	7.45E-05 lb/MMBtu	8.06E-02 tpy	GRI Field
58	N/A	Cadmium Compounds	4.51E-08 lb/MMBtu	4.88E-05 tpy	GRI Field
75	N/A	Chromium Compounds	1.85E-06 lb/MMBtu	2.00E-03 tpy	GRI Field
76	N/A	Cobalt Compounds	3.61E-07 lb/MMBtu	3.90E-04 tpy	GRI Field
99	100414	Ethyl benzene	3.20E-05 lb/MMBtu	3.46E-02 tpy	EPA
109	5000	Formaldehyde	7.10E-04 lb/MMBtu	7.68E-01 tpy	EPA
118	110543	N-Hexane	3.40E-04 lb/MMBtu	3.67E-01 tpy	GRI Field
124	N/A	Lead Compounds	7.67E-07 lb/MMBtu	8.30E-04 tpy	GRI Field
127	N/A	Manganese Compounds	3.95E-06 lb/MMBtu	4.27E-03 tpy	GRI Field
128	N/A	Mercury Compounds	6.09E-07 lb/MMBtu	6.59E-04 tpy	GRI Field
145	91203	Naphthalene	1.30E-06 lb/MMBtu	1.41E-03 tpy	EPA
146	N/A	Nickel Compounds	1.38E-06 lb/MMBtu	1.49E-03 tpy	GRI Field
156	108952	Phenol	2.48E-05 lb/MMBtu	2.69E-02 tpy	GRI Field
158	7723140	Phosphorus	1.47E-05 lb/MMBtu	1.59E-02 tpy	GRI Field
162	N/A	Polycylic Organic Matter	2.20E-06 lb/MMBtu	2.38E-03 tpy	EPA
164	123386	Propionaldehyde	1.95E-04 lb/MMBtu	2.11E-01 tpy	GRI Field
167	75569	Propylene oxide	2.90E-05 lb/MMBtu	3.14E-02 tpy	EPA
171	N/A	Selenium Compounds	6.77E-08 lb/MMBtu	7.32E-05 tpy	GRI Field
176	108883	Toluene	1.30E-04 lb/MMBtu	1.41E-01 tpy	EPA
185	1330207	Xylenes	6.40E-05 lb/MMBtu	6.92E-02 tpy	EPA
			Total HAP Emissions	**2.2 tpy**	

Notes/Comments:
1. Reference: AP-42, Tables 3.1-3 and 3.1-4, and GRI Field Data from GRI-HAPCalc 3.01.
AP-42 factors have been given preference.
2. Total turbine heat input based on full-time operation of the following:

	Output	Heat Input
EU 18 (Siemens Cyclone Turbine)	12,900 kW	123.5 MMBtu/hr
		1,081,860 MMBtu/yr
EU 19 (Siemens Cyclone Turbine)	12,900 kW	123.5 MMBtu/hr
		1,081,860 MMBtu/yr
	TOTALS	247 MMBtu/hr
		2,163,720 MMBtu/yr

3. Emissions are based on NG firing because distillate firing is restricted by the permit and NG turbines emit more HAPs based on available emission factors.
4. Measured heat content (HHV) of gas is 960 Btu/scf.
5. Per turbine heat input is the average of the monthly values indicated in Table 2-15 of the PS 3 Strategic Reconfiguration Construction Permit Application.

Estimated Potential HAP Emissions - Diesel-Fired Engines
Pump Station 3

Maximum Total Heat Input: 27,714 **MMBtu/yr**

Section 112 Hazardous Air Pollutants			Source Category Emission Calculations	
No.	**CAS No.**	**Chemical Name**	**Emission Factor**	**Estimated Emissions**
1	75070	Acetaldehyde	7.67E-04 lb/MMBtu	1.06E-02 tpy
6	107028	Acrolein	9.25E-05 lb/MMBtu	1.28E-03 tpy
15	71432	Benzene	9.33E-04 lb/MMBtu	1.29E-02 tpy
23	106990	1,3-Butadiene	3.91E-05 lb/MMBtu	5.42E-04 tpy
87	5000	Formaldehyde	1.18E-03 lb/MMBtu	1.64E-02 tpy
119	91203	Naphthalene	8.48E-05 lb/MMBtu	1.18E-03 tpy
152	108883	Toluene	4.09E-04 lb/MMBtu	5.67E-03 tpy
169	1330207	Xylenes (isomers and mixture)	2.85E-04 lb/MMBtu	3.95E-03 tpy
187	N/A	Polycylic Organic Matter	1.68E-04 lb/MMBtu	2.33E-03 tpy
			TOTAL HAP Emissions	**0.05 tpy**

Notes/Comments:
1. Reference: AP-42, Table 3.3-2.
2. Total fuel use based on permit-limited operation of the following:

	Output	Heat Input
EU 20 (Caterpillar 3516B)	2250 kW	18.8 MMBtu/hr
Operational Limit - 600 hr/yr		11,297 MMBtu/yr
EU 15 (Detroit Diesel)	425 kW	4.0 MMBtu/hr
EU 16 (Cummins)	399 kW	3.7 MMBtu/hr
Combined Operational Limit - 110,000 gal/yr		14,732 MMBtu/yr
EU 21 (UPS)	65 kW	0.61 MMBtu/hr
Operational Limit - 300 hr/yr		183 MMBtu/yr
EU 27 (MTU)	800 kW	7.51 MMBtu/hr
Operational Limit - 200 hr/yr		1,502 MMBtu/yr
	TOTAL	27,714 MMBtu/yr

3. Engine outputs, heat rates, and operational restrictions from Section 2.2.3 of PS 3 Strategic Reconfiguration Construction Permit Application.
4. Heat input values based on a diesel fuel heat content of 133,925 Btu/gal, and a fuel consumption rate of 0.341lb/hp-hr (Cat 3516B) and a heat consumption rate of 7,000 Btu/hp-hr (other engines).
5. Annual heat input values reflect proposed operational restrictions indicated for each unit.

Estimated Potential HAP Emissions - NG-Fired (dual) Heaters
Pump Station 3

	All NG-Fired Heaters	
Total Input Rating:	12.2	**MMBtu/hr**
Maximum Total Heat Input:	106,872	**MMBtu/yr**

Section 112 Hazardous Air Pollutants			Source Category Emission Calculations		Factor
No.	**CAS No.**	**Chemical Name**	**Emission Factor**	**Estimated Emissions**	**Reference**
9	106990	1,3-Butadiene	3.42E-04 lb/MMBtu	1.83E-02 tpy	GRI Field
14	540841	2,2,4-Trimethylpentane	3.80E-04 lb/MMBtu	2.03E-02 tpy	GRI Field
35	75070	Acetaldehyde	7.38E-04 lb/MMBtu	3.94E-02 tpy	GRI Field
46	N/A	Arsenic Compounds	2.00E-07 lb/MMBtu	1.07E-05 tpy	EPA
48	71432	Benzene	2.10E-06 lb/MMBtu	1.12E-04 tpy	EPA
52	N/A	Beryllium Compounds	1.20E-08 lb/MMBtu	6.41E-07 tpy	EPA
54	92524	Biphenyl	4.73E-07 lb/MMBtu	2.53E-05 tpy	GRI Field
58	N/A	Cadmium Compounds	1.10E-06 lb/MMBtu	5.88E-05 tpy	EPA
75	N/A	Chromium Compounds	1.40E-06 lb/MMBtu	7.48E-05 tpy	EPA
76	N/A	Cobalt Compounds	8.40E-08 lb/MMBtu	4.49E-06 tpy	EPA
99	100414	Ethyl benzene	3.50E-04 lb/MMBtu	1.87E-02 tpy	GRI Field
109	5000	Formaldehyde	7.35E-05 lb/MMBtu	3.93E-03 tpy	EPA
118	110543	N-Hexane	1.80E-03 lb/MMBtu	9.62E-02 tpy	EPA
124	N/A	Lead Compounds	4.90E-07 lb/MMBtu	2.62E-05 tpy	EPA
127	N/A	Manganese Compounds	3.80E-07 lb/MMBtu	2.03E-05 tpy	EPA
128	N/A	Mercury Compounds	2.60E-07 lb/MMBtu	1.39E-05 tpy	EPA
129	67561	Methanol	9.64E-04 lb/MMBtu	5.15E-02 tpy	GRI Field
145	91203	Naphthalene	5.98E-07 lb/MMBtu	3.20E-05 tpy	EPA
146	N/A	Nickel Compounds	2.10E-06 lb/MMBtu	1.12E-04 tpy	EPA
156	108952	Phenol	1.07E-07 lb/MMBtu	5.72E-06 tpy	GRI Field
162	N/A	Polycylic Organic Matter	8.82E-08 lb/MMBtu	4.71E-06 tpy	EPA
171	N/A	Selenium Compounds	2.40E-08 lb/MMBtu	1.28E-06 tpy	EPA
172	100425	Styrene	3.30E-04 lb/MMBtu	1.76E-02 tpy	GRI Field
176	108883	Toluene	3.33E-06 lb/MMBtu	1.78E-04 tpy	EPA
185	1330207	Xylenes (isomers and mixture)	3.50E-04 lb/MMBtu	1.87E-02 tpy	GRI Field
		Total HAP Emissions		**0.29 tpy**	

Notes/Comments:
1. Reference: AP-42, Tables 1.4-2, 1.4-3, and 1.4-4 and GRI Field Data GRI-HAPCalc 3.01.
EPA factors have been given preference.
2. The emission factors for all individual compounds listed in Table 1.4-3 that are identified as polycyclic organic matter (POM) have been summed and represented as the POM emission factor.
3. GRI HAPCalc emission factors for 2,2,4 Trimethylpentane, ethylbenzene, hexane, styrene, and xylenes have been corrected per letter from GRI to UNOCAL dated October 17, 2002.
4. Total heater fuel use based on full time operation of the following:
EU 11 and 12 (1.7 MMBtu/hr Weil McClean Boilers)
EU 13 (2.8 MMBtu/hr Applied Air Systems Heater)
Insignificant Heaters 7.0 MMBtu/hr total heat input
5. Emissions are based on NG firing because distillate firing is restricted by the permit and NG heaters emit more HAPs based on available emission factors.

Estimated Potential HAP Emissions - Diesel Fired Heaters
Pump Station 3

Maximum Total Fuel Use: 563 **Mgal/yr**
Maximum Total Heat Input: 0.08 **10^{12} Btu/yr**

Section 112 Hazardous Air Pollutants			Source Category Emission Calculations		
No.	**CAS No.**	**Chemical Name**	**Emission Factor**		**Estimated Emissions**
46	N/A	Arsenic Compounds	4.0	lb/10^{12} Btu	1.507E-04 tpy
48	71432	Benzene	2.14E-04	lb/Mgal	6.019E-05 tpy
52	N/A	Beryllium Compounds	3	lb/10^{12} Btu	1.130E-04 tpy
58	N/A	Cadmium Compouns	3	lb/10^{12} Btu	1.130E-04 tpy
75	N/A	Chromium Chompounds	3	lb/10^{12} Btu	1.130E-04 tpy
99	100414	Ethyl benzene	6.36E-05	lb/Mgal	1.789E-05 tpy
109	5000	Formaldehyde	3.30E-02	lb/Mgal	9.282E-03 tpy
118	110543	Hexane	0.269	lb/Mgal	7.573E-02 tpy
124	N/A	Lead Compounds	9	lb/10^{12} Btu	3.390E-04 tpy
127	N/A	Manganese Compounds	6	lb/10^{12} Btu	2.260E-04 tpy
128	N/A	Mercury Compounds	3	lb/10^{12} Btu	1.130E-04 tpy
132	71556	Methyl chloroform (1,1,1-Trichloroethane	2.36E-04	lb/Mgal	6.638E-05 tpy
145	91203	Naphthalene	1.13E-03	lb/Mgal	3.178E-04 tpy
146	N/A	Nickel Compounds	3	lb/10^{12} Btu	1.130E-04 tpy
162	N/A	Polycylic Organic Matter	0.0033	lb/Mgal	9.282E-04 tpy
171	N/A	Selenium Compounds	15	lb/10^{12} Btu	5.650E-04 tpy
176	108883	Toluene	6.20E-03	lb/Mgal	1.744E-03 tpy
185	1330207	Xylenes (isomers and mixture)	1.09E-04	lb/Mgal	3.066E-05 tpy

Total HAP Emissions **0.09 tpy**

Notes/Comments:
1. Reference: AP-42, Tables 1.3-8, 1.3-9, and 1.3-10.
2. Assume diesel fuel heat content of 133,925 Btu/gal.
3. Total heater fuel use based on full time operation of the following:
   (13) Insignificant Units 8.6 MMBtu/hr (total input)
   Total Potential Fuel Use 562,524 gal/yr

Estimated Potential HAP Emissions from Piping Fugitives - Light Liquid Service
Pump Station 3

1. Assume that the TOC emissions (losses) are determined from emission factors in Protocol for Equipment Leak Estimates, EPA-453-95-017, November 1995.

2. Based on this protocol, and a TAPs facilities fugitive emissions study conducted by Alyeska in 1998, the potential TOC emissions for PS 3 are estimated to be:
   45 tpy (Light Liquid Service)

3. Conservatively assuming that the light liquid piping leaks are all associated with crude, the individual component emission rates (losses) are then determined using the crude liquid phase weight fractions as determined by Core Laboratories.

Calculation of Component Emission Rates (Losses) - Light Liquids				
Component	Component Weight Fraction in Crude (wt%/100)	Total Light Liquid TOC Fugitive Losses (tpy)	Component Emission Rate/Loss (tpy)	Total HAP Light Liquid Fugitive Emissions/ Losses (tpy)
Methane	0	45	0.0	N/A
Ethane	0.0002	45	0.01	N/A
Propane	0.003	45	0.1	N/A
Isobutane	0.0044	45	0.2	N/A
N-Butane	0.0152	45	0.7	N/A
1,3 Butadiene	0	45	0.0	0.00
Isopentane	0.0088	45	0.4	N/A
N-Pentane	0.0127	45	0.6	N/A
N-Hexane	0.0104	45	0.5	0.47
Hexanes	0.0118	45	0.5	N/A
Benzene	0.0033	45	0.1	0.15
Heptanes	0.0392	45	1.8	N/A
2,2,4 Trimethylpentane	0	45	0.0	0.00
Toluene	0.0084	45	0.4	0.38
Octanes	0.0464	45	2.1	N/A
Ethyl Benzene	0.002	45	0.1	0.09
Xylenes	0.0095	45	0.4	0.43
Isopropylbenzene	0.0005	45	0.02	0.02
Nonanes	0.031	45	1.4	N/A
Naphthalene	0.0016	45	0.07	0.07
Decanes+	0.7916	45	35.6	N/A
SUM / TOTAL	1.0		45	1.6

Estimated Potential HAP Emissions from Piping Fugitives - Gas/Vapor Service
Pump Station 3

1. Assume that the TOC emissions (losses) are determined from emission factors in Protocol for Equipment Leak Estimates, EPA-453-95-017, November 1995.

2. Based on this protocol, and a TAPs facilities fugitive emissions study conducted by Alyeska in 1998, the potential TOC emissions for PS 3 are estimated to be:
   176 tpy (Gas/Vapor Service)

3. Assuming that the gas/vapor piping leaks are all associated with fuel gas, the individual component emission rates (losses) are then determined using the weight fractions previously calculated.

Calculation of Component Emission Rates (Losses) - Gas/Vapor Service					
Component	Component Weight Fraction in Fuel Gas	Normalized Component Weight Fraction in Fuel Gas	Total Gas/Vapor TOC Fugitive Losses (tpy)	Component Emission Rate/Loss (tpy)	Total HAP Fuel Gas Fugitive Emissions/ Losses (tpy)
Methane	0.56826	0.77321	176	136.1	N/A
Ethane	0.07875	0.10715	176	18.9	N/A
Propane	0.04214	0.05734	176	10.1	N/A
Isobutane	0.03578	0.04869	176	8.6	N/A
N-Butane	0.00614	0.00836	176	1.5	N/A
1,3 Butadiene	0.00000	0.00000	176	0.00	0.00
Isopentane	0.00099	0.00135	176	0.24	N/A
N-Pentane	0.00099	0.00135	176	0.24	N/A
N-Hexane	0.00020	0.00027	176	0.05	0.05
Hexanes+	0.00118	0.00161	176	0.28	N/A
Benzene	0.00007	0.00010	176	0.02	0.02
2,2,4 Trimethylpentane	0.00000	0.00000	176	0.00	0.00
Toluene	0.00042	0.00058	176	0.10	0.10
Ethyl Benzene	0.00000	0.00000	176	0.00	0.00
Xylenes	0.00000	0.00000	176	0.00	0.00
Isopropylbenzene	0.00000	0.00000	176	0.00	0.00
Napthalene	0.00000	0.00000	176	0.00	0.00
SUM / TOTAL	0.73	1.0		176	0.2

Notes:
1. The component weight fractions in the fuel gas were normalized to eliminate the non-organic components N_2 and CO_2.

Form Series E

Form E1
Stationary Source Wide Applicable Requirements

FORM E1

Stationary Source-Wide Applicable Requirements

Permit Number: AQ0074TVP03

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

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0074TVP03, Condition 44	40 C.F.R. 61, Subparts A & M, & Appendix A	Asbestos NESHAP	Standard for the removal and demolition of ACM.	Yes	Compliance based upon reasonable inquiry, except during projects to which the standard applies. Refer to rule for applicable MR&R.
AQ0074TVP03, Condition 45	40 CFR 82 Subparts F, G and H	Protection of Stratospheric Ozone	Work Practice	Yes	Compliance based upon reasonable inquiry, except during projects to which the standards apply. Refer to rules for applicable MR&R.
AQ0074TVP03, Condition 46	40 C.F.R. 63.1(b), 63.5(b)(4), 63.6(c)(1), & 63.10(b)(3)	NESHAPs Applicability Determinations	Work Practice	Yes	Compliance based upon reasonable inquiry.
AQ0074TVP03, Condition 55	18 AAC 50.045(a)	Dilution	Prohibition	Yes	Compliance based upon reasonable inquiry.
AQ0074TVP03, Condition 56	18 AAC 50.045(d)	Reasonable Precautions to Prevent Fugitive Dust	Work Practice	Yes	Permit AQ0074TVP03, Conditions 56.1-56.2
AQ0074TVP03, Condition 57	18 AAC 50.055(g)	Stack Injection	Prohibition	Yes	Compliance based upon reasonable inquiry.
AQ0074TVP03, Condition 58	18 AAC 50.110	Air Pollution Prohibited	Prohibition	Yes	Permit AQ0074TVP03, Conditions 58.1-58.5
AQ0074TVP03, Condition 59	18 AAC 50.235(a)	Technology-Based Emission Standard	Work Practice	Yes	Compliance based upon reasonable inquiry.

FORM E1

Stationary Source-Wide Applicable Requirements

Permit and Condition Number	Applicable Requirement Citation[1]	Parameter/ Pollutant	Limit/Standard/ Requirement	Currently in Compliance?	Monitoring, Recordkeeping and Reporting Used to Determine Compliance
AQ0074TVP03, Condition 60	18 AAC 50.065	Open Burning	Work Practice	Yes	Permit AQ0074TVP03, Condition 60.1-60.2

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